

# THE NATIONAL WOOL GROWER

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## Annual Address of President F. J. Hagenbarth Before 51st Annual Convention of National Wool Growers' Association Salt Lake City, Utah, November 12, 1914

IT is my duty as your official head on this occasion which marks the fifty-first annual convention of the National Wool Growers' Association of the United States of America to address you concerning the state of the industry and to make such observations and suggestions as seem pertinent to the occasion.

Like a patient who has been stricken with a dangerous illness, we might say that the wool grower has passed through the crisis and finds, much to his surprise, that his illness was not fatal and that he is a well man and able once more to buffet with the world.

I doubt if there have been many conventions of this Association held wherein the tariff has not been discussed to a greater or less degree. With me at this time, the subject will be taboo, except insofar as to answer one proposition that has been advanced. I hear it repeatedly urged that the higher prices obtained for wool and mutton this year were owing to the fact that we are operating under a free wool tariff. The proponents of this suggestion cannot successfully bestride two horses at once going in opposite directions. They cannot correctly state that free wool enhances the price of wool and at the same time brings cheaper clothing to the consumer. One proposition or the other must be abandoned. My statement is that the wool grower has been prosperous in spite of, and not by reason of the Underwood tariff of 1913.

The proposition that the wool grower is to be placed on a par with

the other industries of the country and receive his proportionate amount of direct or indirect assistance through either a tariff for revenue only, or a protective tariff is an idle dream. Even our western representatives are against us. If the industry is to survive it must henceforth be naturally and unaided. "Efficiency and Economy" from

pecially in Vermont, then followed Pennsylvania. About the time of the Civil War it had obtained a footing in what was then known as the Western Reserve and from then on developed rapidly, especially in Ohio, West Virginia and Kentucky. Later in the '70's and early in the '80's, the industry developed to a considerable extent in

Michigan and Indiana, with scattered flocks throughout Illinois and Iowa. In the 80's began the tremendous feeding industry of Nebraska and Iowa, which became wool producing as well as mutton feeding states.

### Wool Growing in the West.

Shortly after the Civil War, California began the development of the Merino and produced some of the finest Merino wool and the largest sheep of that class that the country had ever seen. Texas and Oregon followed with millions.

The last ten years of the last century the first decade of the present century saw the rise of Montana and Wyoming,—the former with seven and the latter with six million sheep. Up to 1893 wool growing was the staple business of the shepherd in this country. After the disastrous period embraced in the last four years of President Cleveland's administra-

tion when wool was worthless the shepherd had learned that the mutton side of the sheep must be developed as well. And from that time there has been such a tremendous shift of sentiment that today, we find the production of meat is the primary business of the shepherd, and the growing of wool is secondary.



F. J. Hagenbarth, Salt Lake City, Utah

now on must be inscribed high on the banner borne by the successful shepherd.

### Review of the Past.

The past hundred years has seen great changes in the physical distribution of the wool growing area in the United States. Early in the century its seat was in New England, es-

Twenty years ago the mutton breeds began to be imported into the United States from England in considerable quantities and since then the movement has increased to great volume. This pursuit after mutton has become so universal and so pronounced that there is serious danger to the industry by reason of reflex action. By this I mean that our shepherds have largely, not only neglected wool, but through the process of marketing all of their she stuff in the shape of lambs are liable to be left, in the next few years, with nothing on their hands but a lot of shelly old ewes. When the rehabilitation of their flocks with young breeding ewes shall have then begun this country will witness the greatest scramble for this class of stock that has ever been seen in its history. Those who are far-sighted enough to maintain and breed their she stuff will come out on top.

During these processes we have gradually seen an increase in the production of sheep in the western half of this continent until today the seat of the industry has moved from New England into the Rocky Mountain states. In the past five years, even in this section flocks have decreased, especially in Montana and Wyoming, where the reduction has been 40 per cent. Texas, California and Oregon now rank low as wool growing states. Old ranges and old customs are now passed. New feeding grounds and new methods are in vogue.

My object in thus briefly outlining to you the past of the industry is to form a judgment from the history of the past what the future may be. You have noted that there has been constant changing and shifting of scenes. Twenty-five years ago hundreds of thousands of sheep,—I might say millions—were trailed from New Mexico, Arizona and Oregon across the Great American Desert to the feed lots of Nebraska and Iowa. Today not a single herd so passes. Twenty-five years ago the feeding of lambs was practically unknown. Today the man who feeds wethers is a rarity. And so it goes all along the line. There has been change

everywhere. This teaches us that we are to look forward to changes in the future and it is my mission today to call your attention to what I think these will be and wherein lies the course to be followed by the successful shepherd of the future.

#### Prime Factors in the Future.

In making an analysis of the situation based on thirty years' actual experience and on an observation which has embraced the industry in every phase throughout the world, I have come to the conclusion that if the industry is to endure the following factors must be considered:

First. Wool growers must learn to be real shepherds; breeding must be properly practiced; preparation of products must be scientific; and the marketing of the same must be on new and improved lines.

Second. There must be better co-ordination between the various factors in the business. By this I mean that our affiliation and understanding must be closer and better defined with the railroads, with the packers, with the wool dealers and wool manufacturers, and with the bankers. All of these interests must be imbued with the idea that the upbuilding and promotion of the wool industry is a patriotic duty.

Third. Legislation, both national and state. We need proper land and leasing laws; provision for fenced areas on long leases, allowing improvement of ranges; proper bounty laws; laws preventing the use of inferior rams; and enlarged interest in the industry on the part of state agricultural colleges and the Department of Agriculture.

Fourth. Feeding and care of flocks; the elimination of unfit animals from our herds; proper cross breeding; the shipment of fat stuff only to market and the finishing of feeders at home.

Fifth. Organization; the shepherd must learn to support his state and national associations. He should support those institutions which are striving for the upbuilding of the industry, especially the "National Wool Grower" and the National Wool Warehouse Company. Lamb sales and stock

shows should be encouraged.

After briefly enumerating the above factors it may be well to enlarge to some extent on each one as we move along.

#### Breeding and Marketing.

How ridiculous it is for a shepherd to maintain a flock shearing two pounds less wool per head than it should be shearing; marketing 70 per cent of inferior lambs where 85 per cent of toppers should have been had and marketing both wool and mutton in the most primitive manner.

A little casual observation throughout the world will teach us that the success of the two great wool producing areas—Australasia and South America—is largely due, not alone to climatic conditions as has been generally urged, but by reason of proper breeding and care of flocks and marketing of products. Within the last twenty-five years South Africa has proven the entire proposition of the benefits of proper breeding. Twenty years ago, or even less, South African wools were considered among the least desirable on the market. Today they are considered serious competitors against the best Australian wools. Can we say as much for our own country? Except in isolated instances the wools produced in the West today are no better than they were twenty-five years ago. During the past five years, largely owing to the campaign inaugurated by the National Wool Warehouse Company, it is true there has been marked improvement in the methods of packing and marketing of wool, but the breeding side is still largely neglected. The proper selection of our breeding stock and the use of proper rams on them and the keeping each year of a reasonable number of the resultant she lambs from this cross will in five years, not only rejuvenate our flocks, but will add millions of dollars to our individual and national wealth. There is nothing to be lost and everything to be gained by proper cross breeding. This is the primary foundation of our future success and all other factors are subordinate.

In the matter of marketing wool it

is generally admitted that Australia has a system that is well adapted to her conditions. It does not follow, however, that that system would be successful here. In fact, Australian wools are today not nearly as well prepared for market as they were ten years ago. In some sections their wools are put up just like ours are. Further, Australian methods of marketing are vastly different from ours. We have no auction sales. We have no wool exchanges. We have no defined standards. We must prepare our wool to suit the market which we have in this country, as that is where it must be sold. There is room for improvement, however. If we take out the tags and other objectionable parts, grade and then bale our wool, it will be better suited to our market today than it would be if sorted and classed as is done in parts of Australia. This entire subject should be placed in the hands of the National Wool Warehouse and Storage Company, and I am sure they will work out a satisfactory system of preparation for market, which will not entail a needless expense upon our people without any corresponding benefit. Mr. Cosgriff deserves the thanks of every wool grower for the pioneer work which he has done in this direction.

I wrote an article which was published in the National Wool Grower for October, which I hope most of you have read. This concerns the improper marketing of fat lambs destined for immediate slaughter. If a man's object is the raising of feeder lambs, and feeder lambs only, I have nothing to say. However, it was my bad fortune for a whole month in the latter part of September and the first half of October of this year in Chicago to witness the sad spectacle of misguided mutton growers sending lambs onto the market weeks after they become prime and had been ready to ship. This course not only resulted in very material loss to such shippers, but also glutted and demoralized the entire market.

There is a time in the life of every animal, including the human species, when he is ready to make a transition

from the milk period to that of solid food. Experience has demonstrated that this takes place in the lamb between the ages of four and four and one-half month. Many shepherds imagine that as long as there is feed on the range they are making money in keeping their lambs, imagining they are growing and getting fatter. This is a great mistake. After a lamb is four months old he begins to pay more attention to grass and forage and cares less for his mother's milk. In like manner his mother gradually begins to lessen her milk production. Lambs that are kept to five months and up to six months of age show a decided shrinkage of lamb fat and deterioration in quality when slaughtered and really weigh no more at five and one-half months of age than they did at four and one-half months, besides producing an inferior quality of mutton. Lambs, like peaches, or any other perishable product, should be immediately marketed when ripe. Otherwise, shrinkage and deterioration set in. It seems a pity to see an intelligent and otherwise progressive shepherd produce a fine quality of lambs, properly bred, and then see him market these same splendid lambs a month too late and after they had become dried out and practically feeders.

I hope to see this matter thoroughly discussed at this convention and some decisive action taken which may result in more scientific distribution of lamb shipments to market the coming year.

#### Co-ordination With Allied Interests.

It is a pleasure to be able to say that during twenty-five years past the sheep industry has never been given as good treatment as it has during the past year by some of the railroads. This result has been brought about by bringing to the attention of the transportation agents the abuses that had heretofore obtained. This result was accomplished without legislation and, I believe, is going to be enduring. In like manner other abuses may be corrected. For instance, certain methods practiced by the wool dealers in the

matter of taxes which they charge against the wool growers. I refer to the discount of 50 per cent of rams' wool which is usually about the best part of the clip; unreasonable allowances for tags; the purchasing of wool on the sheep's back by contract, which is unmitigated gambling, and whereby anyone, whether he has a knowledge of wool, its shrinkage, qualities of the clip and consequent values, can buy wool whether he knows anything about the commodity, or not. He is all right as a wool buyer just so long as the house, which he represents, is a good gambler. This practice should be stopped.

Then again the credit of the wool man should be built up with his banker. There are large financial institutions in the United States which would be glad to furnish money for the feeding of sheep in the West for market, provided, they were made acquainted with the fact and advantages pertaining to the movement and it is up to us to move. In like manner, when we have convinced our local bankers that we are conducting our business along legitimate, scientific lines and are making proper preparations against possible loss in winter time by providing hay, corn, cottonseed oil cake, or linseed oil cake, he will come to realize that no better security can be offered. In order to do this, however, many of us must abandon the slipshod methods of the past.

#### The Packer.

I would like to add a word concerning the packer. In this connection I will start by saying that, "Half the lies you hear are not true." However, the packer has some sins to answer for. Principal among them is his practice of taking advantage of market conditions at times so as to buy prime fat lambs for practically the same price as feeders will bring. At times the shipper is in a measure helpless. When his stuff is ready to go to market it must go. If there is a resultant congestion on the market the packer takes advantage of the situation and during the season just past has hammered prices down in one week nearly a dollar per hundredweight. It is true



a crowded market gives him this opportunity. But is the practice morally right? My solution of the problem is that the feeder market should establish the basis of values. In other words, the farmers and feeders who come into the yards and purchase one, two, three or four-deck loads establish a price among themselves which they are willing to pay for feeders. This price, or prices, are generally based on financial conditions, probable feeder supply, the crop situation, or other factors which are known to all and are of general application. These prices being firmly established on the market, I contend that seconds, or inferior killers should be worth 30 to 50 cents per cwt. more than feeders, and prime fat lambs worth 30 to 50 cents per cwt. more than seconds, or from 75 cents to \$1.00 per cwt. higher than feeders. I saw feeders sell this fall for from \$7.10 to \$7.25 and the highest bid obtainable on prime fat lambs was \$7.35 to \$7.40. At the same time, calves were selling at 11 cents per pound and even beef, grass fed, was selling at 8 cents upon the same market.

A committee should be appointed by this Association to confer with the packers on the injustice of this situation and at least make an effort for fair and proper consideration. I believe such a conference will bring results. If it does not we have other methods of recourse available.

#### National Legislation.

In my address last year I devoted some space to the discussion of this subject and not only wish to reiterate all I said at that time, but will again dwell on the subject of proper lease and land laws. We find every other interest in the country clamoring for land legislation of one sort or another. We find the faddists and theorists again busy. For instance, listen to the following, a measure now pending before the national House of Representatives:

"Be it enacted by the Senate and House of Representatives of the United States in Congress assembled, That any person entitled to enter land under the homestead laws may locate upon and enter as a summer residence home-

stead not to exceed ten acres of any of the public lands either within or without the forest reserves, and upon either surveyed or unsurveyed land, by making improvements thereon to the value of \$300, including a habitable residence and suitable outbuildings, and maintaining in good faith a summer residence of not less than two months during each of the three summers succeeding his entry; Provided, That lands chiefly valuable for coal, or for minerals or timber, shall not be subject to entry under the provisions of this act; Provided, further, That the entrymen shall not be required to be a resident of the state in which the entry is made."

What proposition, from a grazing standpoint could be more ridiculous than this? With ten-acre homesteads scattered over the grazing area of a forest how in the name of common sense is the wool grower or the cattle man to maintain his flocks or herds? We might as well pass a law and be done with it reading as follows: "It shall hereafter be unlawful to graze any cattle or sheep on the National Forests, as they are reserved for the purpose of affording summer outings to the idle rich."

A commission should be appointed which will make a proper classification of all unoccupied government domain. This area should be segregated into sections most suitable for grazing and most suitable for agriculture. Those sections so determined as being for the greatest good to the greatest number for grazing purposes should be strictly set aside for grazing and no entries allowed thereon.

Suitable long time leases should then be granted to stock growers whereon it should not only be optional, but compulsory, that he properly develop and use the same, by the building of fences and construction of reservoirs and ditches and such other improvements as are necessary to fully develop and protect the grazing area in question.

Today in the West we have tremendous areas of summer range in the mountains and winter range on the desert and low-lying foothills. Unless

proper lambing range in the spring time and suitable fall range is provided for livestock these mountain and desert areas will in time become waste places. Unfortunately many of the ranges suitable for lambing or cattle grazing and for fall grazing for both cattle and sheep are partially adapted to agriculture and are becoming the abiding place of what is known as the "dry farmer." Many of these lands are unquestionably more adapted to livestock than they are to farming. They lie in frost belts, where crops are only certain one year out of three and where the seasons are too short for legitimate farming. Ten homesteaders scattered over one of these areas with their dogs and other impedimenta with an investment at a maximum of \$1,000 each, will drive off cattle and sheep aggregating an investment of twenty times as much and of much greater value and necessity to the community. On the other hand, areas that are more suitable for legitimate farming than for the grazing of livestock should be unhesitatingly opened to settlement.

The practice of allowing homesteaders on forest reserves by the same token should be prohibited. If the rule, "The greatest good to the greatest number" be strictly enforced in the application of our land policy, then this question will literally solve itself after proper classification is made.

There has been considerable economic discussion throughout the country bemoaning the decreasing meat supply. In the face of this situation why should not the powers beset themselves to the task of increasing the supply of this important commodity by affording consistent encouragement to the further development of cattle and sheep growing—such encouragement would increase the supply and should lower prices. At the present rate consumption must decrease or prices go higher. It is an economic question worthy the best attention of the entire country.

Another law that is badly needed is the bounty law. There are about 240,000,000 acres of land in twelve western states withdrawn from entry in one



form or another. On these lands is the breeding ground of wild predatory animals. Such lands are under the jurisdiction of the United States government and the stockman whose tenure is uncertain is not justified, nor is he to be called upon for the extermination of these plagues.

Thousands of sheep are killed annually on our forest reserves and thousands of lambs perish before they ever reach their summer grazing grounds. Congress has this year appropriated \$50,000.00 for an investigation of this subject. Congress should give the Forest Service at least \$200,000 annually for the destruction of wild predatory animals in the forests and an equal amount should be devoted to the clearing up of other government lands. Sheepmen pay many times this amount annually to the government. States should likewise enact uniform bounty laws and bounties should be increased wherever possible. The annual loss to the livestock industry in these twelve states is computed at about \$15,000,000. There is little chance at this time for national legislation along these lines, unless the proposition is rigorously and persistently pressed upon the attention of Congress.

It does not seem possible to obtain the passage of a lease law. The one section homestead law will no doubt pass in the near future. The "summer" homestead law will be simply a nuisance. Dry land farming has only been successful in some sections. I believe that in many areas, with some of which I am familiar, that the cost of raising dry land wheat for a period of ten years is greater than the returns derived from wheat so produced. Some branch of the department should investigate the question of dry land farming and advise Congress just what may be expected from it and likewise make a statement as to what the same areas would have produced if devoted to cattle and sheep. The livestock industry must have some consideration shown it if the meat supply is to continue at a reasonable cost to the public. I therefore call upon this convention to pass some form of resolu-

tion favoring a reasonable and consistent land lease law.

State laws should be passed prohibiting the use of inferior rams for breeding purposes. It is not generally realized how many millions of dollars is being lost annually by improper breeding. Such laws are now on the statute books pertaining to bulls, as well as stallions. This matter simply needs the attention of our shepherds in each state to bring about a great improvement in the matter of breeding. Breeders of stud stock for sale to other parties should be compelled to take out a license and comply with certain rules and regulations before they should be allowed to sell to the public.

#### Feeding.

Could our shepherds but be brought to realize that every dollar spent for feed will come back to him with another dollar tied to it there would not be so much penuriousness in this regard. There is positively no excuse nowadays for inflicting privation on our flocks and losses on ourselves. Any stockman who has experimented in this matter has thereafter been a devoted advocate of keeping fat stock the year around. Even on our deserts sheep may be fed at a small expense and slight inconvenience so as to go through the winter in splendid condition, with practically no loss except from wild animals, with a yield of from one to two pounds more of wool on a well grown sheep, which will sell for from 2 to 3 cents per pound more and a resulting lamb crop fully ten per cent greater than if the same sheep were starved through. Proper feeding thus not only makes these savings possible, but costs nothing and brings in a handsome profit besides. The insurance feature is not to be overlooked. A flock of sheep may be insured practically as cheap as one of the buildings in this city if proper management is exercised, thus increasing our credit at the bank, minimizing our winter losses, and establishing a distinct gain all along the line.

We wool growers should learn to ship our fat stuff only, keeping our feeder lambs and old ewes at home to

be fed upon our own alfalfa and grain, of which there is an abundance that goes begging for a market every year. It is a serious economic waste to ship our feeder animals and our surplus grains both to outside markets.

It should be our sagacious desire to increase our output and to obtain every dollar possible through the proper use of our brain. Why should we ship our feeders and our grain likewise abroad? Why not feed our grain to our feeders at home and thus kill two birds with one stone? A golden opportunity is extending its hand toward us; have we the forethought to grasp it?

#### Organization.

I must say that it is thoroughly discouraging to the officers and directing factors in your organization to note the lack of support that is given the National Wool Growers' Association and the "National Wool Grower" journal by the shepherds of this country. I believe it is pure diffidence on your part. I do not believe that you fail to recognize the vast necessity of your organization and your journal, nor the amount of good which it has done for you. Some of these things your secretary will detail for you. Hundreds of thousands of dollars have been saved you by this organization during the past few years. Yet it is a constant struggle of your Association and your official organ to keep alive. I trust that some radical means may be adopted at this convention for the extension of your powers for good and the strengthening of that which is yours and yours only.

In like manner, I think that every wool grower should rally to the support of the National Wool Warehouse Company which has been a great factor in the uplifting of our industry and whose plans at the present time are so broad and liberal that no wool grower should fail to support it, if for no other reason than that of enlightened selfishness.

Ram sales and stock shows should be attended and encouraged by us at every opportunity. Here we glean a knowledge of the other man's abilities

and performances with practically no cost to ourselves. We learn what can be done by breeding and who accomplishes such results. We are entirely too penurious in our expenditures for good stud sheep. An investment of \$100 in a single ram is trifling when we consider that such a ram can increase the wool clip on his get from 20 to 30 per cent on one cross and this gain goes on down through our flocks in concentric circles, increasing year by year and rendering almost incalculable in a few years the gain that can come to us through the proper use of high grade sires. This subject has not received enough of our attention and it should be considered from every angle.

#### Forest Reserves.

As a rule the operation of the National Forests has proven satisfactory. Many desirable changes have been, and are constantly being made, and we find the service amenable to any reasonable request for reform. The department of late years has assumed a different attitude toward sheep grazing. It is now conceded that sheep benefit rather than injure the forests. The law, therefore, should be amended in its caption to make grazing one of the first reasons for maintaining forests. Impartial investigation and experiment have conclusively proven that sheep do not injure the water sheds. They are an actual benefit by consuming trash and weeds that contaminate the forests. Sheep do not go into the water, nor do they pollute it. 100 cows on a stream afford more pollution than 3,000 sheep. There is no more cleanly animal on the face of the earth unless it be a deer than this same sheep. I, therefore, feel called upon to deprecate the continual drivel which we hear from various communities concerning the pollution of neighboring streams. If traced to their source, I believe that nine times out of ten the agitation will be found to have arisen from cattlemen who desire the sole use and occupancy of the ranges in question. I might add in this connection that sheep are the only animals that do not suffer from any disease that can be communicated to the human family.

This cannot be said of hogs, nor of cattle.

We would be glad to have from the Forest Reserve more detailed experiments on a larger scale and full reports thereon concerning the grazing of sheep in fenced pastures, and lambing them in closed areas. This will be important information.

#### Future Prospects—Wool.

The shortage in the world's wool supply in 1913 was equal to the total American clip, causing an advance of 30 per cent on the London market. This shortage was caused in part by drought in Australia; declines in South America; destruction of sheep in southeastern Europe and a loss in sheep numbers in the United States. One of the prime factors throughout the world causing declines in wool growing is due to the restrictions caused by devoting land to other purposes. Many great Australian flocks have been dispersed. The only country showing a decided increase in wool growing is South Africa. Even Europe is discarding the sheep. Great changes in the character of wool are shown. The Merino is declining and the crossbred increasing in Australia at the rate of 2 per cent per annum. One-third of the Australian wool clip is now crossbred; 85 per cent of Argentine wools is likewise crossbred. In the United States crossbred wools have greatly increased in the past ten years. Of all the wool sold in London in 1895 only 31.7 per cent was crossbred; last year about 52 per cent was crossbred. This going to crossbred wool is largely accounted for by the increased demand for meat. A few years ago wool was grown one year and used the next year. Consumption has now caught up with the supply and we are using our wool the same year it is grown. There has been practically no old wool carried over in Boston since 1912. This country will have consumed nearly all of its domestic wool by January 1, 1915, and had it not been for war the future could reasonably have been predicted. War usually advances wool prices, but never before have all the chief wool manufacturing countries, save one, been

at war. However, during war men consume five times as much wool as during peace. The wools most used for clothing purposes are crossbreds and pulled wools (pulled wools, as you know, are those taken from the pelts of sheep which have been slaughtered for mutton. Crossbred and pulled wools advanced from 1 to 3½ cents per pound at the last London sale. Fine wools, however, declined about 2 cents per pound, but have since advanced. Certain pulled wools advanced as much as 10 cents per pound. It is quite probable that crossbred wools now entering so largely into consumption will become so dear that Merinos will take their place and this will advance the price of Merinos. The average cost to buy wools abroad and lay them down in Boston is 2 cents per pound. This cost has now increased to about 4 cents per pound, a fairly decent tariff in itself. At this time there is a lack of ships in which to transport wool. It is further predicted that in 1915 the Australian wool clip will be 75,000,000 pounds short as compared with 1914. There is no question but what our own wool clip will be decidedly short.

Germany has 6,000,000 sheep; France, 16,000,000; England, 27,000,000; Russia, 45,000,000; Austria-Hungary, 13,000,000; Portugal, 3,000,000; Servia, 3,000,000; Montenegro and Belgium, 600,000. All of these countries are, or will be, at war. Sheep are being driven behind the armies for food and it is only a question of a short time at the present rate of destruction until fully half the sheep in Europe will have disappeared.

In summing up the available wool supply of the world today I do not believe the question can be stated with greater force than to call your attention to the fact that since 1895 the population of the world has increased 30 per cent. On the other hand, there has been no increase in the numbers of sheep except in Asia, which does not produce much wool used for clothing. These are principally carpet wools. In 1913 the world produced 2,880,889,000 pounds of wool, being within 5 per



cent of the wool produced in 1895. We are, therefore, safe in stating that in proportion to population there has been a decrease of between 20 and 25 per cent in the available supply of wool for clothing purposes since 1895.

#### Mutton.

Not only in the United States, but in the world over, is there a pronounced shortage of beef. Mutton and lamb must take its place. People are eating more mutton and are willing to pay the same price for it as for beef. One of the best meats in the world is a prime milk fed lamb. There is, therefore, no justification for low prices for such lambs and the matter will surely regulate itself.

Top lambs, 8 cents; veal calves, 11 cents; grass fed steers, 8½ cents; grass wethers, 5½ cents; range cows, 7 cents; range ewes, 5 cents. Why this discrimination? It cannot endure and we are bound to see materially higher prices for our mutton. Whereas the importation of fresh meats from abroad are at the present time practically nothing, for the first eight months of the present year they amounted to 220,000,000 pounds. This meat was carried across the equator, and much of it injured in transit. It is, however, brought into these United States and sold as domestic meat. It is not subject to our strict inspection when slaughtered and if not offensive to the nostrils or to the site upon arrival at a port of entry is stamped by the United States government as "Government Inspected" and thus sold to an unsuspecting public. We should have a law in every state compelling a dealer in imported meats to display a sign to that affect. There is no mutton or lamb in the world superior to that from our western mountains and it is up to us to see that justice is done to our product. This is one of the matters which your Association will have in mind for future labors.

#### General Condition.

It is a pleasure to say that at this time the credit of the sheepman at the banker's is generally good. A different picture from what it has been during the past few years through tariff

agitation. From now on we should hold the game in our own hands. With good bank credits; large production in the West of proper feeding materials; with better railroad service and great improvement in stockyard service; with high prices sure, for wool, at least the coming year, and for mutton from now on, it seems to me that our future prosperity lies in our own industrious hands and that if we will march under the banner of "Economy and Efficiency" nothing can bar us from landing within the gates of prosperity.

I wish once more to congratulate the Association on the versatility, energy and industry of your splendid secretary. He has during the past year been your lawyer, as witness his work in the rate cases; he has been your editor, look at his splendid magazine; he has in fact at all times been the right man in the right place, and on behalf of myself and the Association which I represent, I wish here and now to extend to him our heartfelt thanks.

#### RAM SALES.

Your statement in the Wool Grower about ram sales has interested me greatly. I think it is an excellent move and if you decided to hold such a sale you may rest assured that we will send about two carloads of our best Hampshire rams. When you go to England you have to buy most everything at public auction. Many breeders there will not sell at private sale at all. If your range men ever get the auction system started, they will never go back to the old system.

ROBERT BLASTOCK,

Donerail, Kentucky.

#### SCALE OF POINTS OF THE ENGLISH LEICESTER.

The "points" of the present-day Leicester may be summed up as follows: Lips and nostrils black, nose slightly narrow and Roman, but the general form of the face, wedge-shaped, and covered with short white hairs; forehead covered with wool; no vestige of horns; blue ears, thin, long and mobile,

a black speck on face and ears not uncommon; a good eye; neck short and level with back, thick and tapering from skull to shoulders and bosom; breast deep, wide and prominent, shoulders somewhat upright and wide over the tops; great thickness from blade to blade, or through the heart; well filled up behind the shoulders, giving a great girth; well sprung ribs, wide loins, level hips, straight and long quarters; tail well set on, good legs of mutton, great depth of carcase, fine bone, a fine curly lustrous fleece (the sheep are well-wooled all over) free from black hairs, with firm flesh, springy pelt, and pink skin. The general form of the carcase is square or rectangular; legs well set on, straight hocks, good pasterns, and neat feet.

#### GREAT INCREASE IN SHEEP.

In the annual report of one of our agricultural colleges we note the following: "Of the 45 ewes bred, 34 raised 51 lambs, a satisfactory increase of 150 per cent."

Fifty-one lambs would, of course, be an increase of 150 per cent from 34 ewes, but in this case 45 ewes were bred and the increase is, therefore, but 113 per cent. Certainly in figuring increase, it must be based on the number of ewes bred, rather than on the ewes that happen to raise a lamb. Otherwise, a man might breed 10 ewes and five of them have twin lambs, when the increase would be 200 per cent on the ewes that lambed and only 100 per cent on the ewes bred.

From some of the lambing reports that we hear of, one is led to believe that the per cent of lambs is based only on the number of ewes that actually raise a lamb, rather than on the ewes bred. Figuring this way a sheepman can take a pencil and get rich quick, while if he figures his increase on the whole number of ewes and rams in the flock, as he should do, he may not get rich at all.

We are very anxious to have good sheep photographs and hope our readers will send them in.

# RESOLUTIONS

*Adopted by*

The Fifty-First Annual Convention of The National Wool Growers' Association, at Salt Lake City, Utah, November 14, 1914

## PUBLIC LANDS.

**WHEREAS**, the greater portion of the remaining unoccupied public domain is of questionable agricultural value and in many cases of greater value for grazing.

**THEREFORE, BE IT RESOLVED**, That this Association recommend to Congress to make no immediate changes in our land laws, but to authorize and make an appropriation for an immediate classification of the unoccupied public domain into agricultural and grazing lands.

## Inspection of Imported Meats.

**WHEREAS**, under the law now in force whereby foreign meats are allowed to be imported into the United States subject to post mortem inspection only, at the port of entry, and after such inspection are stamped "United States Inspected," whereupon such foreign meats so inspected and stamped are lawfully eligible to be sold in any part of the United States, and

**WHEREAS**, such a system as now practiced permits the shipment into and sale throughout this country of the carcasses of animals that may have been tubercular or infected with other diseases at the time of slaughter in the foreign country, from which they originated, and said diseases being communicable to the human family.

**THEREFORE, BE IT RESOLVED**, That this Association petition Congress to enact laws which shall require the same inspection both ante-mortem and post-mortem, of imported meats as of domestic meats.

## Imported Meat to be Sold as Such.

**WHEREAS**, in view of the fact that there have been 219,499,000 pounds of fresh meats imported into the United States during the first eight months of the present year, much of which has deteriorated in transportation.

**THEREFORE, BE IT RESOLVED**, that this Association petition all State Legislatures to pass a law requiring all dealers in such imported meats to place a sign in their place of business which states that they handle imported meats.

## Diseased Products.

**WHEREAS**, Foot and Mouth disease, the scourge of the live stock industry of foreign lands, has now been imported into the United States, and threatens to work irreparable injury to stockmen in the sections where it now exists and,

**WHEREAS**, it now seems probable that

this disease has been brought to the United States with hides, wool or meat, imported from foreign countries.

**WE, THEREFORE**, desire to call the attention of the Nation to the danger that lurks in these imported animal products, and to urge upon the Federal Government that every possible means be taken to guard against infection through imported meats, wool, hides and other animal products, and in every way possible to protect our own animal industry against foreign diseases.

## Predatory Wild Animals.

**WHEREAS**, the annual loss of meat producing animals caused by the ravages of predatory wild animals is conservatively estimated to amount to at least \$15,000,000.00,

**THEREFORE, BE IT RESOLVED**, That this Association petition Congress to appropriate \$300,000.00 to be devoted to the extermination of such predatory wild animals.

## Destructive Dogs.

**WHEREAS**, the Predatory dog is a serious menace to farm flocks where maintained.

**THEREFORE, BE IT RESOLVED**, That this Association petition Congress and State Legislatures to enact legislation for the regulation of predatory dogs for the protection of domestic animals.

## Declaration of Tariff Principal.

**WHEREAS**, THE NATIONAL WOOL GROWERS' ASSOCIATION recognizes allegiance to no political party, and asks no favor before the law, but in all matters of legislation whether State or National demands a square deal and equal treatment with all other industries of like importance, and

**WHEREAS**, a reasonable duty on imported wool would, during the last year, have brought to the Government \$16,000,000.00 in revenue without having increased the burden on the consumer, and at the same time would have benefited the producers of this country and made the necessity for a war tax decidedly less.

**THEREFORE, BE IT RESOLVED**, That this Association, considers unfair any tariff measure that places wool on the free list while retaining a protective duty on the finished article made from such wool, and to make the existing tariff law fair to producer, manufacturer and consumer, and in the interest of increased revenue to the Government, respectfully urges Congress to place a reasonable duty on imported wool at the first opportunity.

## MINIMUM WEIGHTS.

**WHEREAS**, the present minimum weights for the transportation of lambs in double-deck cars are already greater than the actual possible loading weights, and

**WHEREAS**, There exists much variation in the width of such double-deck cars whereby this actual weight is still further reduced,

**THEREFORE, BE IT RESOLVED**, That this Association petitions the INTERSTATE COMMERCE COMMISSION to determine the minimum weights of such double deck cars in proportion to actual floor loading space.

## Regulating Lamb Shipments.

**WHEREAS**, there is an annual congestion of the central sheep and lamb markets in September and October with a consequent depreciation in values due to heavy marketings by range sheepmen, and

**WHEREAS**, Many men market their lambs at that time regardless of age or condition of the lambs.

**THEREFORE, BE IT RESOLVED**, That this Association urge all sheep men who market fat lambs to do such marketing at the earliest profitable age and further,

**WE** urge the Department of Agriculture and Western Agricultural Colleges, to investigate, and if possible, determine the age at which fat range lambs should bring the greatest net return to the producer.

## Pure Fabric Law.

**WHEREAS**, There is now pending legislation intending to provide against misrepresentation of adulterated manufactured products of wool.

**THEREFORE, BE IT RESOLVED**, That this Association petition Congress to enact a suitable pure fabric law for the protection of the American people.

## The National Wool Grower.

**WHEREAS**, The National Wool Grower published and owned by the National Wool Growers' Association and State Wool Growers' Associations, is now firmly established as one of the leading sheep and wool papers of the world, and

**WHEREAS**, this paper has established the highest possible standard of integrity and fair dealing, both in its editorial and advertising policy and is now invaluable to all sheepmen.

**THEREFORE, BE IT RESOLVED**, That we most urgently solicit the subscriptions and active support of all flockmasters, to the end that the power of this official paper may be extended even beyond its present limits.

## Compulsory Dipping.

**WHEREAS**, there has been agitation for the establishment of compulsory dipping for the eradication of sheep ticks.



THEREFORE, BE IT RESOLVED, That this Association is opposed to any such compulsory legislation.

#### Standardizing Wool.

WHEREAS, at the present time there are no definite standards for the determination of the several grades of wool,

THEREFORE, BE IT RESOLVED, That this Association recommend that the Department of Agriculture create a standardization for wool the same as it has done with cotton, and, if possible, establish a set of definite standards by which the different grades of American wool may be distinguished.

#### Lamb Prices.

WHEREAS, during the past season the margin between the price of feeder lambs and first and second class killing lambs was entirely too narrow, resulting in heavy losses to many sheepmen.

THEREFORE, BE IT RESOLVED, That the President and Executive committee of this Association be authorized to appoint a committee to call upon the packers before the next shipping season and endeavor to secure a fairer and more equitable price for the different grades of lambs.

#### Wool Embargo.

WHEREAS, It is reported in press dispatches from Washington that the National Government has been requested to give certain guarantees to Great Britain whereby wools from Australia, New Zealand, and Cape Colony may be released from the embargo placed on them by the various Colonial Governments and thus be permitted to be imported direct into this country, and

WHEREAS, The principal trade outlets for wool grown in Australia, New Zealand, and Cape Colony are lost while the war lasts and the consumption of these wools in England is impossible as a great proportion are unsuited for military requirements, and

WHEREAS, Wool production is one of the chief industries of Australia, New Zealand and Argentine, and without a market for their wools producers in these countries are in much the same situation as regards depreciation of values as are the cotton producers of the United States, and

WHEREAS, Australia and New Zealand produce about three times as much wool as the United States, and under normal conditions the United States has bought not to exceed 10 per cent of their production, and

WHEREAS, South America produces as much wool as the United States and under normal conditions the United States has bought not to exceed 10 per cent of its production, and

WHEREAS, Germany, France, Belgium and Holland usually purchased at points of origin about 65 per cent of the wool produced in these countries and while the war

lasts will probably be able to obtain little, if any, it is apparent that to divert to the United States the great surplus not now saleable in these countries can only result in lower prices for wool produced in this country. Especially is this true in view of the fact that the wools desired released from the embargo are the grades most generally produced in this country, and in view of the fact that domestic wools have not been advanced in price by reason of the war.

BE IT THEREFORE RESOLVED, That the National Wool Growers' Association assembled in its 51st Annual Convention does protest against any action being taken by our National Government which will result in compelling our domestic wool growers to compete in prices with foreign grown wools whose market has been taken away and values decreased by the war.

BE IT FURTHER RESOLVED, That in view of the above conditions and the further fact that there is no embargo on wools produced in South America, that we believe such an emergency exists and the situation confronting the American wool growers is so serious that the Federal Government is justified in imposing import duties on wool as a temporary expedient and to prevent the U. S. from becoming the dumping ground for the otherwise unsaleable wools of Australia, New Zealand and South America.

#### Our Thanks.

WE HEREBY desire to extend our thanks to the National Wool Warehouse and Storage Company for their magnificent educational exhibit of wool and its products.

WE ALSO HEREBY desire to express our appreciation for the efficient work performed by the Executive officers of this Association during the past year.

We desire to most sincerely thank the good people of Salt Lake City and their Commercial Club for the elaborate manner in which they have prepared for, and the royal manner in which they have entertained the delegates present at this convention. We shall carry away with us the most pleasant memories of this occasion.

We also sincerely thank all those who have so kindly furnished music at each of our sessions here, and also the ladies reception committee that has done so much to make our visit a pleasant one.

WE DESIRE to thank the press of Salt Lake City for the very liberal notices given to our deliberations here and to thank the railroads that so kindly made reduced rates for this convention.

#### FOOT-ROT IN SHEEP.

In talking with many sheepmen in all parts of the country, we learn that

early in the spring foot-rot was more prevalent than for many years. This, no doubt, is accounted for by the unusually wet spring, which allowed the trouble to get a good start. Strange as it may seem, fat lambs and foot-rot generally prevail the same season, both due to the same cause, viz., wet weather.

#### WENSLEYDALES NOT SATISFACTORY.

In Great Britain they have a long wool sheep known as the Wensleydale. The sheep resembles the other English long wools except that it has the reputation of producing wool with the highest lustre of any of the long wool breeds. Some years ago one of our western agricultural colleges purchased a small flock of these sheep and kept them for a few years. We have been advised that that college found that the Wensleydale was not well suited to our western conditions and possessed no advantage over our present long wool breeds.

#### RATES REDUCED.

The Great Northern railway has just issued a new tariff making a reduction on livestock shipped to coast points. The reduction amounts to \$3.00 per car at Chinook, Montana, and is graduated down so that it amounts to \$16.00 per car at Culberson, Montana.

#### WOOL EXPORTS FROM THE ARGENTINE.

From a recent report we publish the following table showing the total amount of wool exported from the Argentine during the past six years.

1908	351,076,000 pounds
1909	353,364,000 pounds
1910	301,180,000 pounds
1911	264,072,000 pounds
1912	328,928,000 pounds
1913	240,160,000 pounds

Practically all the wool from the Argentine is exported so that these figures show a considerable decline in production.

## The Forest and Their Users

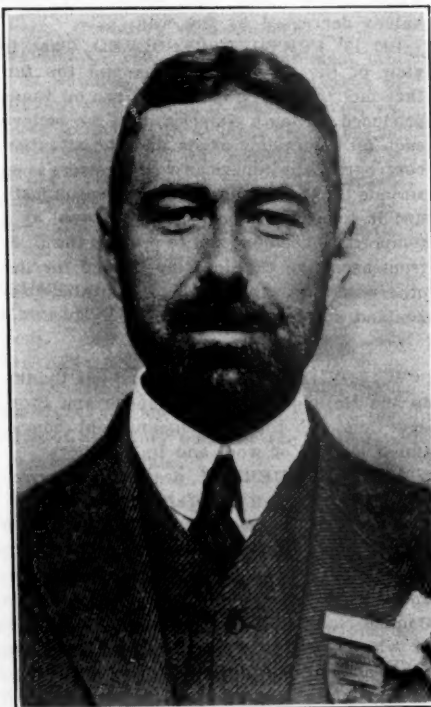
Address by L. F. KNEIPP, Assistant Forester, Washington, D. C.

As a forest officer I first came in contact with the sheep industry back in 1900, when I spent a couple of strenuous spring days keeping sheep off the Prescott Forest Reserve in Arizona. Personally I had no particular prejudice against the sheep, but just at that period the opinion prevailed that the grazing of sheep could not under any circumstances be reconciled with the protection of a National Forest Reserve. But only this year I spent another two days in making an investigation which in fairness to all interests concerned will for the present at least result in the continued grazing of sheep on that same Prescott National Forest. So it is quite possible, you see, for a federal officer to absorb new ideas and acquire a materially different point of view.

During the fourteen years that have intervened between these two incidents I have mentioned, both the sheep industry and the National Forest movement have undergone some remarkable changes, but none more remarkable than the change in their attitude toward each other—where once there was mutual misunderstanding and antagonism, there is now good will and mutual understanding and consideration. If in the old land office days sheep were regarded as highly undesirable in the Forest Reserves, it may square the account some to know that in this day and year there are Forest Supervisors who are worrying over the possibility of losing some of their sheep permittees, that the Forest Service has sent representatives from Montana to Oregon and Washington to induce sheepmen to make use of surplus range in northern Idaho and Montana, that it has prepared expensive prospectuses, inserted advertisements and labored strenuously with the railroads to secure sheep rates, all for the same purpose, and that it has spent quite a little money in building new sheep trails, in order that parts of the Forests in which sheep have never grazed may be made accessible to them. But these are facts, facts that combined with many other circumstances tend to show that the Forest Service and the woolgrowers of the western states have reached a condition of complete understanding and mutual regard.

During the year 1914, approximately 29,000 paid grazing permits were issued which allowed the grazing of 1,616,900 head of cattle and horses, 7,560,000 head of sheep, 58,600 head of goats and 3,400 head of swine. Compared to the figures for the year before some interesting changes are to be noted. The number of cattle and horse permits was greater by 1,590, while the number of sheep permits fell off to the extent of 280.

The number of cattle and horses increased to the amount of 69,000 head, while the number of sheep and goats was less by 329,000 head. These changes were not brought about by the Forest Service, for the full number of sheep authorized to graze on all the Forests was greater by 346,000 head than in the preceding year, reaching the enormous total of 8,368,000 head, or about one and one-quarter million more than were actually grazed within the Forests. There were few, if any, forests, where the number of sheep permitted was arbitrarily reduced below the number of sheep grazed the year before.



L. F. Kneipp

With the possible exception of two or three Forests, a point has been reached where material reductions to stop damage to Forest lands are no longer necessary and upon practically every Forest reduction to provide for the issuance of permits to new owners are now imposed almost entirely upon the outfits that change hands.

At no time during the ten years the Forest Service has been in existence has the sheepman's use of the forest ranges been so well established and on so firm a basis as it is today. Nevertheless, the indications are that the reports for 1915 will show fewer sheep permits and less sheep than this year for many of the men who have hither-

to run sheep are now changing to cattle. This change is hard to analyze, for while it is true the cattle business now offers attractive opportunities, it is equally true that at no time in recent years have the people of the United States been so dependent upon the western woolgrower for wool and mutton as they are right now and at no time have so many factors been favorable to a stable and a profitable industry.

One matter to which my attention has been called on this trip is the apparent alarming increase in the number of predatory animals within the Forests. In this there is a problem confronting you which for its solution is going to require the full wholehearted co-operation of the stockgrowers and the county, state and federal authorities. It is true beyond question that the toll which the stockgrower pays annually to the coyote, the wolf, the bobcat, the bear and the mountain lion or cougar is so enormous that it affects the production of meat, wool and hides and the prices of those commodities to the consumer to such an extent as to be a matter of grave national concern. Many of the western stockgrowers feel that the Forest Service should take more active measures to reduce the number of noxious animals in the Forests. The service has done something along this line. In the past six or eight years the Forest officers have killed about 40,000 animals, besides carrying on poisoning operations that probably accounted for many more. Some years back, ninety odd supposedly experienced and expert trappers were employed at one time. A few of them were extremely successful, the majority of them rendered inadequate and unsatisfactory service. Admitting that the federal government should assist the stockmen to protect their flocks and herds against the ravages of destructive varmints, it is not at all clear that the Forest Service should be the agency selected to carry on the work. The National Forest lands in the eleven far western states amount roughly to about 18 per cent of the gross area of these states and constitute about 30 per cent of the unappropriated public lands in those same states. It frequently is alleged that the forests afford unusual protection to the animals, but this is not true, for hunting is wholly unrestricted and in fact is encouraged by the loan of traps and the free distribution of poison to settlers who will work in co-operation with the Forest officers. By far the greater proportion of loss of stock is caused by coyotes and wolves, species by no means peculiar to the National Forests. The coyote as a matter of fact, is commonly known as the prairie wolf



and careful investigations by the Biological Survey confirm the opinion that wolves and coyotes are bred, born and spend the greater part of their life cycle in the lower foothills and the low lands. To confine the exterminative work to the forests alone would result in but a temporary benefit, for the past experience of the service is that the animals, like water, find a common level and a range that is freed of them soon becomes repopulated by other animals from the outside.

But this disclaimer of full responsibility does not mean that the Forest Service is not thoroughly in sympathy with your efforts to secure relief. It is strongly in favor of the principle upon which the Mondell bill is based, and would be glad to see that bill or one along similar lines enacted into law. Under the provisions of such a bill it would be within the authority of the Secretary of Agriculture to distribute the appropriation between various bureaus of his department, the Biological Survey or the Bureau of Animal Industry or the Forest Service, or else to apportion it among the various states, according to the plan which, in his judgment, would produce the best results. This is the best legislation to have. The selection of one bureau to perform the entire work might be too restrictive, and an inflexible bounty law might not prove wholly satisfactory, but with the details left to the Secretary of Agriculture, every situation could be met.

But the problem is far too big to be settled by the passage of a single act, either state or federal; your own experience has proved that. There is only one way to meet it and that is for every stockgrower, every county, every state and every bureau of the federal government to work together with a single plan of action. Then, and not until then will your problem be solved to your satisfaction.

For the present at least, the livestock industry of the western states is the one most vitally affected by the administration of the National Forests. For the lumberman there is an enormous acreage of privately owned timberland upon which he can continue to operate for many years, and for the producer of hydro-electric power there are many undeveloped sites outside of the National Forests, but for the western stockman, especially the sheepgrower, there are comparatively few ranges outside of the National Forests upon which he can summer his stock without some sacrifice of quality if not of quantity. For this reason, economic considerations demand that so far as possible, the administration of the National Forests shall be shaped so as to cause the least possible disturbance of the western livestock industry. On the other hand, these same considerations demand that the stock industry, in its use of forest lands shall progress along the lines which will cause the least

conflict with the governmental policy of forest and watershed protection. There is a mutual interest involved and responsibility for future progress must be shared equally by the forest officer and the livestock producer.

Of the 158 million acres of land now included in the National Forests of the far western states, approximately 137 million acres is government land, the balance being owned by states, railroads, companies and individuals. The land classification work now in progress may perhaps result in the opening to entry of a considerable acreage and in course of time, the adoption of more intensive methods of forest management will necessitate the exclusion of livestock from certain parts of the forests. But after all this is done, there will still remain an enormous acreage of forest land producing as a by-product a forage crop of very great value which properly should be utilized. A stockgrower's interest in the conservation problem is naturally most keen with respect to the extent to which he is going to continue to use this forage crop in the conduct of his business.

It may safely be predicted that the stockmen will be allowed to use the forage crop to the fullest extent consistent with the proper protection and development of the forests and watersheds. A prediction of this kind is, of course, somewhat vague, because it does not fix any limit of time or number. But limits of time and number cannot very well be stated since they depend very largely upon the extent to which the production of stock upon National Forests in future years can be made consistent with the prevailing standards of forest and watershed protection.

It is the purpose of the Forest Service to make the National Forests contribute in the largest measure and in all possible ways to the welfare of the nation, and therefore the natural desire of the man at its head is that the number of stock shall increase rather than diminish, provided that in so increasing it does not defeat the purpose for which National Forests are set aside. It is a matter of pride to the men in charge of the Forests that the amount of stock per gross acre of National Forest land is now approximately 60 per cent greater than it was in 1904. According to the records of permits issued and stock grazed in that year, there was an average of a cow or a horse, or five sheep or goats to every eighty-one acres of National Forest land, while in 1914, there was the same amount of stock to every 50.45 acres grazed. It should be remembered too, that this acreage includes patented lands within the Forest, the areas which produce no forage and the millions of acres of ungrazed lands in the forests of the northwestern states. As a matter of fact, the best estimates made by the Forest Service show that

only about 100 million acres of National Forest land is actually used by stock at the present time and on that basis the acreage per head of cattle, or its equivalent, would be less than thirty-two acres.

Modern business has developed its tremendous efficiency mainly in two ways, by fostering a get-together spirit which knits closely the units of a single industry or a group of allied industries; and by eliminating waste, waste of energy and waste of materials. It has found that prejudice yields no dividends, that to harmonize a conflicting interest is far better than to destroy it. It has found too that the largest and safest profit lies not in monopoly and extortionate charges, but in a reduction in the units of energy and the quantity of raw material entering into the manufacture of an article of given quality. The results of this policy are so strikingly successful that the wisdom of applying similar principles to the solution of the problem of how to grow trees and sheep on one and the same tract of land must appeal to stockgrower and forest officer alike.

That the idea of bringing two conflicting interests together is right in spirit and beneficial in practice is demonstrated in a concrete way by the very pleasant relations which now exist between the officers of the Forest Service and the members of this very Association. The basic principles of its plan of range management were sound, but nevertheless, the Forest Service made relatively little progress toward the attainment of its ideal until it secured the earnest and organized co-operation of the stockgrowers who use the Forests. By means of that co-operation it has done reasonably well. How much better it will do from now on will depend almost entirely upon the degree of co-operation which will hereafter be secured from the stockgrowers. But we can drop the question of getting together. We are all friends and all working harmoniously for a more or less common cause. This brings me then to the other point, the elimination of waste.

This subject is both important and ticklish; important because it is the end toward which the Forest Service is aiming and working; ticklish because it involves questions of the actual handling of sheep under practical conditions, a subject upon which the members of this Association are probably the greatest authorities in the United States. I know, and the men who work with me know, the arguments which may be offered in support of a continuance of prevailing methods; the thousand and one hazards of the business, drouth, storm, feed shortage, poison, wild animals and countless other things that can never be wholly anticipated or guarded against; the dependence upon herders, the difficulty of tearing away from time-honored and time-tried precedent; but all you are

asked to do is to give the methods worked out by the Forest Service experimentally, a fair and full trial in actual practice. If they are good, adopt them, if they are wrong, show where they are wrong in a constructive way so that other methods which are right may be worked out and substituted.

In striving to perfect better ways to graze stock upon the forest lands the Forest Service is not endeavoring in any way to reflect upon the methods which hitherto have been used. There is no question but that up to a few years ago, the sheep industry progressed along logical lines. Feed was cheap and abundant, and moreover was common property belonging to whoever possessed himself of it. On the other hand, supplies, freight rates, taxes, and other operating expenses were high, losses were frequently heavy and profits were unstable and comparatively low. It naturally followed that the future or permanent condition of the range was a minor consideration which did not seriously influence a man hard pressed to survive competition and pay expenses. But today the order has changed. The range is the stockman's chief concern and its condition marks the difference between profit and loss. So, as I have stated, the object of the Forest Service, the end toward which it is working is simply to prevent waste in order that the stock industry may endure in its present, or even greater proportions.

When I refer hereafter to principles of range management, I mean merely rotation in the use of ranges, size of bands, methods of herding and handling, the elimination of unnecessary trailing and other activities by which the most feed can be secured by the stock and the least wasted. The Forest Service is not seeking novelty purely for the sake of novelty and it does not advocate any change in methods until it has assured itself by careful experiment that so far as can be foreseen, the method to be substituted is superior to the one it is to replace. There is one point I would like to hammer home right now, and that is, that every one of the things the Forest Service stands for in the matter of range management not only pays for itself, but yields an additional profit as well. The best proof of this is the fact that many of the members of this Association have already adopted the suggestions of the service and find that they are both practical and profitable.

The cost of running 4,800 head of sheep in four bands instead of three, is practically nothing if by the change you secure heavier lambs and have smaller losses and so derive as large a net profit. The trouble of handling range on a rotation system is well repaid if by such handling the feed is increased and you bring out fat lambs instead of feeder lambs. It may perhaps cost you \$10 per month extra to induce your herder to handle his sheep under the open herd-

ing plan and to bed them out, but this means only \$30 to \$50 additional for the summer season and is only a small part of the gain of probably \$200 per band secured through putting five pounds of extra weight on your lambs, to say nothing of the improvement of your range. I might remark here that the service does not evolve all these ideas as to changes in running stock, but that most of them are based upon suggestions submitted by different forest officers as a result of special cases where some particular method of handling stock has proved unusually successful. In every instance the suggestion must stand the acid test of practicability and profit and unless it meets that test, it is not adopted.

In the study of the problems connected with the use of forest lands for grazing purposes, the Forest Service has always been constructive, never destructive. No investigation has ever been initiated to prove a case against livestock, or to justify its exclusion from the Forest, but to the contrary, the investigations have been designed always for the sole purpose of determining methods of eliminating objectional features so that the grazing use of the Forests might continue, or be facilitated or improved. The earliest investigation was that of the advantages of enclosed ranges, as against herding on the open range, the results of which I will discuss later. Coupled with it was the first work of artificial reseeded, which subsequently was extended until it embraced over 500 separate planting projects distributed through eighty-one different forests in eleven of the western states. These projects by the way, have demonstrated that so far as present cultivated species are concerned artificial reseeded will not prove effective upon more than about 5 per cent of the National Forest lands. The tests were very carefully conducted and minutely studied, and the conclusions reached are based upon pretty sound premises. Following close on the artificial reseeded work came the studies of reseeded to native grasses through alternation in the use of ranges, a plan that has since demonstrated its practicability upon any number of forests. It has been made quite evident that though only small proportion of the native vegetation may remain upon the range it will be possible by careful handling to restore the range to a condition of normal productivity, without any material loss of forage values and for the 95 per cent of the forest land upon which artificial reseeded is not practicable, this method of natural reseeded is the only one which will prove successful. Closely connected with the studies I have mentioned is that of the work of plant identification, which is designed to determine the useful plants so that they can be encouraged, the poisonous ones so they can be avoided or eradicated and the worthless ones so that

they will not be considered in making estimates of grazing capacity. Thus far, almost 20,000 separate specimens have been collected and identified. The various investigations enumerated had not been carried very far before they pointed to the need for a change in methods of herding and handling stock and careful studies were made of the relative advantages of close herding and central bed grounds as against open herding and nightly changes of bedgrounds. In conducting all these studies a need developed for more detailed information regarding the lands used for grazing purposes so that they might be utilized to best advantage. To meet this need a plan of intensive range reconnaissance was devised and put into application. Thus far something close to eight million acres have been covered and the work will be carried on until practically all of the land which may be used for grazing purposes has been examined and classified.

Nowadays almost every settler upon the public lands manages to take a chunk out of some sheepman's lambing ground or range and in parts of the West where lambing in sheds or on hay is impracticable, the problem of lambing a band of sheep is a grave one. The Forest Service therefore undertook to try out the plan of lambing sheep in small enclosures, supplemented by lambing sheds, and has secured most encouraging results.

Other problems of perhaps less important character have also received the attention of the Forest Service as, for example, the study of grazing as an element of fire protection, which shows the stockman to be a most effective factor in protecting forests from destruction by fire.

The extent to which livestock interfered with the natural reproduction of the forest was also a moot question until the service took it up and made very careful and detailed investigations upon a number of National Forests. These show that while under some circumstances grazing is undoubtedly a factor in retarding the natural reproduction of the forest, there are other more numerous combinations of circumstance under which its interference is so small that it does not merit consideration at the present time.

Another problem which the service is now attacking is that of wild game, particularly elk, as against domestic livestock. There are a great many factors involved in the protection of game which can hardly be reduced to a basis of dollars and cents. But, so far as possible, we are trying to search out and analyze the various elements of benefit and injury so that the reservation of parts of National Forests for purposes of game protection and propagation can be determined upon a more accurate basis than we at present have for working out questions of this nature.



In 1907 the Forest Service enclosed about four sections of land within the Wallowa Forest in eastern Oregon with a woven wire fence sufficiently high and strong to keep all kinds of predatory animals, except the larger bears, from securing access to the enclosure, during five successive years bands of sheep were grazed within the enclosure, under close observation, but practically without any attention; the sheep being allowed to divide into small groups and graze as naturally as so many mountain sheep or deer. The primary object of this experiment was not to demonstrate the practicability of dividing all national forests into enclosed ranges, but rather to determine the degree of difference in range consumption, waste and injury between sheep grazed under the range methods then and even now in vogue and sheep grazed in a perfectly natural, normal way. The sheep distributed themselves naturally over the range, browsed through the heavy timber and underbrush where a whole herd would not be taken, used the feed as it ripened. The test extending over a period of five years showed that sheep so grazed required 25 per cent to 50 per cent less range, that the lambs weighed eight to ten pounds more than lambs of similar age and grade grazed under herd, that the natural loss was one-half of one per cent, as against an average of 3 per cent in the bands that were herded, that the wool was cleaner and heavier, and that the sheep did practically no damage to the tree growth. So far as labor costs were concerned the results were very large in favor of the enclosure, since it was apparent that with a series of enclosures one man could satisfactorily attend to 8,000 to 10,000 sheep. The general results when summed up would undoubtedly appeal to a business man as being distinctly profitable, provided the cost of fence construction and maintenance would not be too high and there was certainty of tenure during a period approximating the useful life of the improvements.

The total cost of the eight-mile fence used was \$6,764.31—or an average of \$845.53 per mile—divided as follows:

Materials, equipment and supplies to the railroad .....	\$289.22
Transportation to pasture .....	129.68
Construction and supervision .....	426.63

The pasture is remote from shipping points and the cost of transportation, which included some road construction, was about the maximum that might be expected. The labor costs also were high, since labor was scarce and in demand. It is estimated, however, that under average conditions an entirely satisfactory fence can be constructed for about \$400.00 per mile. Mr. Jardine, who conducted these investigations, has arrived at the conclusion that with four sections of land as the range unit, 2,200 ewes

with lambs as the sheep unit and a three months' summer season as the unit of time or use—a fence costing \$400.00 per mile will pay for itself in a little less than six years, yielding an additional profit or dividend of \$215.00 at the end of the sixth season and of \$746.00 per season after that. In reaching this figure he allows \$25.00 per year for maintenance and 8 per cent interest on the \$3,200.00 investment, but makes no allowance for taxes on improvements, which a private owner might perhaps have to pay. It is probable that the fence would have a useable life of ten years or more. The Billy Meadows fence has been standing for seven years and is still in good condition. On the same basis a fence costing \$500.00 per mile probably would pay out in ten years or less.

One will naturally wonder why a system that has proved so successful has not been more generally adopted in the National Forests. One reason is that the plan, as you can see, requires a large initial investment in fences which will not be returned in less than six years. The proposition is not financially attractive unless the investor has absolute assurance of exclusive and uninterrupted use during the beneficial life of the improvements which is perhaps a period of ten years, and in addition has the right to transfer or sell his privilege together with his improvements at any time within that period. If allowed this would encumber the forest lands with claims and equities which perhaps might utterly defeat the purpose for which the forests have been established. It would hamper, if not prevent, the recognition of new grazing applicants and the readjustment of range allotments in time of feed shortage while it might interfere quite seriously with homestead settlement as well as the planting of trees and other phases of forest management. Perhaps in course of time long-term grazing permits may prove advisable, but until the trend of western development becomes more definitely established it will be unwise for the Forest Service to give the stockgrower the assurance he must have before he can safely plan on fencing his ranges.

Experimental tests of lambing in small enclosures which have been conducted on the Cochetopa Forest in Colorado for several years, show that by the use of such enclosures better than average results may be secured with less injury to the range, lower labor costs and less hazard due to inability to secure competent help during the lambing period. These lambing enclosures are small in area and comparatively low in cost of construction and maintenance, so there is no objection to their wider use upon parts of the National Forests adapted to the lambing of sheep and set aside for that purpose. The urgent demand for lambing grounds is one of the most important of the problems

of range allotment and the sheep growers who must of necessity lamb upon the range may find in the small lambing enclosure a partial solution of their problem.

When the Billy Meadows pasture had demonstrated that existing methods of range use could be improved anywhere from 20 to 100 per cent, the Forest Service initiated new investigations to determine just how much of that improvement could be secured without the erection of expensive fences. As a result of these investigations, we have about arrived at the conclusion that given a moderate sized band of sheep, from ten to twelve hundred ewes with their lambs, a good reliable herder who directs the leaders rather than drives his band, scatters them out and herds the outside lines, and beds the sheep where they quit feeding for the night, is, all things considered, pretty nearly as useful as a \$5,000-fence. This system of herding means that the sheep get all the feed; they don't overgraze the easily herded range and leave thirty days' feed in the brush and timber. It means that there is more feed eaten and less trampled into the ground; that the hospital bunch gets some pickings as well as the head of the band. It means that all of each sheep's energy is going toward the production of wool and mutton instead of being spent in making a run for the band when the dog is sent out to round in the strays, or in trailing back and forth each night and morning to the place where the herder has made camp.

It doesn't give quite the results that probably could be secured by completely enclosing a range with an animal proof fence, but it is a pretty effective substitute and well worthy of general adoption, upon all ranges where local conditions make it practicable.

The keynote of this talk has been that upon the National Forests the business of grazing stock must be so shaped as to be consistent with the prevailing standards of forest and watershed protection. I realized when I said this that it is not an easy thing to do, for the gradually established methods of a giant industry can not be changed overnight. The changes that are necessary can not be evolved by mathematical formula, or by guess work, but must be worked out step by step, test by test, until the true is sifted from the false, and the established principles are reduced to a workable and profitable plan of action. Part of this work can be, and is being done by members of the Department of Agriculture; part of it must be done by the stockgrowers themselves, for however sound may be the theories formulated by the Forest Service investigator, their practical application rests in the hands of the twenty thousand men who actually handle the stock upon the forest land. The success or failure of the experiment of summer of which the Forest Service is de-

the stock owners and their employees. The Forest Service can not supervise the handling of every band of sheep or bunch of cattle, it can only point the way and shape its course according to the results secured.

Right here I might mention one important obstacle to progress, especially in our work on the sheep ranges. I am not aware that any method advocated by the Forest Service has resulted in a loss, but until a new plan is tried and found practicable a possibility of loss always exists. The man whose sole source of income is derived from a single band of sheep cannot afford to experiment with new and untried methods, for if the method is unsuccessful, his loss is overwhelming. The duty of trying out new methods should properly be assumed by the larger operator, who can distribute a possible loss over a greater number of sheep and so not feel it.

The difficulty of dealing with the large operator is that the requirements of his business prevent him from giving his personal attention to the details of an experiment and its execution is left to employees, who perhaps lack the interest or the ready grasp of principles and objects essential to the success of the plan. Interest and understanding are the prime factors in working out new principles of range management, and while a great many herders and camp tenders possess both in high degree and have contributed largely to the work of the Forest Service, our chief hope for progress will lie in our ability to interest the owner himself, to get him out on the range. It frequently has happened in the experience of the Forest Service that a brief joint examination of a range by a sheep owner himself and the supervisor has put an end to doubts and misunderstandings that had prevailed for years; and so it is quite logical to assume that a display of personal interest by the men who own or control the sheep that graze upon the forests will be equally efficacious in working out the very best principles of range control.

So I am going to appeal to you who are here, for all the co-operation and assistance that you can give, and I can safely assure you that it will be used to the benefit of your industry and not its injury. In this connection, I want to thank you on behalf of the Forest Service for the co-operation you have rendered, and are rendering, and I believe it will be safe to thank you for what you will do, for I feel assured that you will do all you can and that is the most we can ask or expect.

#### SHEEP FEEDING IN COLORADO.

Late in the fall of 1888 it is said that <sup>stead</sup> Brothers of Paxton, Nebraska, <sup>you \$10</sup> <sup>er to handle</sup> in feeding sheep at that

point for some years, went down into New Mexico and purchased a train of feeder lambs. These were billed to their plant in Nebraska where they were to be fed. While the train was passing through Colorado a very heavy snow fell and the train was unable to proceed. The lambs were then unloaded somewhere near Fort Collins for temporary feeding, but as the storm continued some days arrangements were made to feed the lambs at Fort Collins instead of shipping them on to Nebraska. This is said to be the first lambs ever fed in Colorado. From this accidental beginning Colorado fed last year 1,300,000 lambs.

#### POISONOUS PLANTS ON WESTERN RANGES.

Washington, D. C.—Six of the poisonous plants that cause the heaviest losses of live stock on western ranges

### To Woolgrowers:

In order that you may not be misinformed, we desire to state that at the last annual convention of the National Wool Growers' Association the question of the outlook for our 1915 wool clip, was discussed and the general sentiment was that the outlook is bright and the prospect good for better prices.

are described with the aid of full-page photographs in a circular just published by the United States Department of Agriculture under the title, "Principal Poisonous Plants of the Western Stock Ranges." This publication will be sent on request.

Despite the damage that these plants do every year there are many stockmen who do not recognize them and in consequence are unable to protect their stock effectively from being poisoned by them. It is probable that there are on the ranges a large number of poisonous plants but the heaviest losses are those produced by the plants named in the circular. These are the zygadenus, or death camas, the lupine, the rattlesnake weed or white loco, one of the

worst of the many varieties of loco plants, the tall larkspur, the low larkspur and the cicuta or water hemlock. Of these the cicuta alone is dangerous to man, causing violent convulsions and even death. The root of it, however, is the only poisonous part. In the case of the other plants, with the exception of the lupine, all parts are poisonous to stock. Both the tall and the low larkspur lose their poisonous qualities after blossoming.

#### ADVERTISING MUTTON.

Something more than a year ago the Department of Agriculture, at the request of this association, published Bulletin 526 "Mutton and Its Value In the Diet." Since this publication was issued the National Wool Growers Association has been working to give it a wide circulation. Up to the present time the government has sent out 200,000 copies of this bulletin.

#### DOGS BIG TAX PRODUCERS IN KENTUCKY.

The state of Kentucky has a new law which provides for a tax on all dogs. From this fund owners of sheep killed by dogs are reimbursed for their losses, and the balance of the tax is turned over to the county school funds.

According to the report of the State Board of Equalization, Kentucky had last year a dog population of about 123,546, and the tax collected after paying for the sheep losses produced a balance for the school fund of \$43,876.69. Where the dog tax in a county is not large enough to cover the sheep losses, the tax is pro-rated among the losers.—The Cattleman.

#### UTAH WOOL TO LONDON.

We are advised that during October Hecht, Liebmann & Company, wool brokers of Boston, shipped 150,000 pounds of Utah wool to London to be used in army contracts. It will be recalled that this firm bought much Utah wool last spring.



# The Wild Animal Toll

Address by HUGH SPROAT, Boise, Idaho

**T**ODAY the woolgrowing industry of the west is confronted with three really serious problems. Uncertainty of tenure on grazing lands; predatory animals; and foreign competition, due to the removal of the tariff on our mutton and wool.

Owing to conditions over which we have no control, the last named has been discounted to a very considerable extent, and if we could convince our law makers in Washington of the really desperate condition of our industry, as regards the settlement by homesteaders, of lands totally unfit for anything but grazing, and the enormous loss yearly due to predatory animals we might be able to entirely discount our loss of a protective tariff.

The only reason the industry has been able to survive the continual, I might say persecution, from both state and national legislation, has been the immense natural resources, and favorable climatic conditions of this great western country.

We have only to visit the great stockyards of Chicago or Omaha, and compare the native product, with the great bands of western lambs, to realize the importance of the west as a stock growing country, and I want to say to the packers and feeders, that our condition is really desperate. The contraction more especially of our spring and fall ranges is working a hardship on many growers, and the continued increase of predatory animals more especially the coyote, constitutes a menace which has passed beyond the ability of both the state and the individual to cope with.

Practically all western states have been paying bounties on predatory animals. The following table shows the amount paid out by states and counties in bounties on those wild animals for the last fiscal year, for which figures are available.

Arizona .....	\$ 21,270.00
California .....	42,624.00
Montana .....	178,047.00
Oregon .....	52,344.00
Washington .....	25,000.00
Idaho .....	27,050.00
Wyoming .....	11,340.00
South Dakota .....	13,000.00
Utah .....	54,472.00
Texas .....	88,930.00
New Mexico .....	29,000.00

Total .....

A total of over half a million dollars, to which can be added at least as much more paid by individuals making a total of at least a million dollars paid each year in a vain attempt to keep in check the predatory animals. When one considers that

not one-half the number of animals killed are turned in for bounty, many are poisoned and never found, we can realize the unceasing warfare necessary to even hold in check the enormous yearly increase.

When the National Wool Growers' convention met in Omaha in 1911, the committee on resolutions, representing one man from each western state, spent one-half day discussing the loss of livestock attributable to predatory wild animals. These men reached the conclusion that in the territory west of the Missouri river, the loss to the stockmen was no less than \$15,000,000.00 per annum. I believe this estimate to be conservative.

Talk with individuals regarding their



Hugh Sproat

losses in lambs and you will find this loss placed at from 6 to 12 per cent, and this after the bands have been marked.

The direct and indirect loss of lambs during the lambing and up till the lamb is about three weeks old is not considered, but will amount to 3 to 5 per cent more. By direct loss, I mean lambs actually killed by carnivorous animals, indirect loss is due to the bunching of the ewes too quickly after the birth of their lambs, causing losses, especially among the twin lambs through losing mothers. Until a lamb is ten days old, the ewe cannot identify it except by smell, and one can readily see that where fifty or sixty ewes with lambs are huddled

together, the loss of twins is very large as very few ewes will trouble to seek the second lamb.

I believe that placing the loss of lambs due to predatory animals, at 12 per cent of all lambs dropped, is conservative, this is speaking of range conditions, from lambing till shipping time, a period of from four to five months. Losses in old sheep for the year will average 3 per cent.

When in Washington this spring, attending the wool conference, I made the statement that there was a loss of 10 per cent in lambs due to predatory wild animals, and qualified there and then, as a member of the Annanias club. I have raised that 2 per cent, after talking with a great many wool-growers, and I believe many in this audience will bear me out.

The question has been raised, that the losses in lambs are in a great measure due to the carelessness of herders more especially when on the trail between spring and summer range. There is no doubt, but that small bunches of lambs are occasionally lost, and when a band turns up with the loss of lambs out of all proportion to the average losses per band in the same outfit, it may safely be attributed to this cause, but when practically all the bands come to the shipping points with losses of from seventy-five to one hundred head per band, all herders cannot be accused of carelessness.

In the open herding which has always been the system employed in the great lamb growing section of Idaho, the bands bedding wherever night overtakes them, the predatory animals work at a great advantage as compared with the sections where bands are corralled every evening, and my personal experience together with that of my neighbors, is that 900 lambs shipped, for every 1,000 marked, is as good as we can expect.

Let me cite just one example of a neighbor's experience, actual figures of bands are hard to get, we are kind of ashamed to acknowledge our losses, but this outfit has been noted for years for the careful handling of its sheep, and on account of the failure to make any kind of a lambing from a small bunch of merino yearling ewes, their fourth band went to the mountains about half the size of the other three.

Losses in first band .121  
Losses in second band 94  
Losses in third band .88  
Losses in fourth band 67

A total of 370 out of 4,100

Their oldest band was in charge of one of their old experienced men, and he complained during the course of the summer of

presence of a litter of half grown coyotes in the locality of his camp. His lamb count showed the toll taken to support them. The second and third bands were around average loss, but the third one for the number of lambs was unusually high. It has been found that the size of the band is no protection from the depredations of the coyote, practically the same loss occurring if the band contains 500 lambs or 1250. It has become a custom to run as nearly 2,500 ewes and lambs as possible, that having been found by experience to be as large as can be successfully handled, and it keeps the loss per band due to wild animals, at a smaller percentage than would be with smaller bands.

Under the name of predatory animals, we have the wolf, coyote, wild cat, lynx, bear and cougar. In my section of Idaho, the wolf is practically unknown, but he is beginning to make his presence felt in localities where a few years ago he was quite unknown.

The bear in years when the berry crops is a failure, as was the case this year, is a distinct menace to the woolgrower, not only through killing the individual sheep, but the attack by bears on a band of sheep is extremely likely to result in what is known as a "pile-up," due to stampeding of the band and piling the ewes and lambs on top of each other against logs or brush or in gullies, causing death to many by smothering.

The woolgrower who runs along from year to year without meeting with one of these losses is indeed lucky, cases where the loss reached 500 head are on record. Bears are also extremely destructive to the sheep camps, tearing up the tents and eating and destroying the herders supplies. They also have been known to take terrible toll on some lambing camps.

The cougar is more of a menace to the horse and cattlemen, young colts and calves being more to his taste among domestic animals, but occasionally sheep are attacked.

The wild cat and lynx are destructive at times, but when we come to the coyote, we find our greatest enemy, when compared to him, the fox is a novice; the ease with which he dodges our traps and poisoned baits is uncanny to say the least, and his wanton destruction of defenceless creatures whenever and wherever he finds them is appalling. We find him wherever there is a supply of food suitable to his taste, and while preferring a carnivorous diet, is not averse to becoming a vegetarian, choke cherries, prunes or watermelons being all suitable if hunger presses. Spring lamb, is however, in my opinion his choicest dainty, and if his appetite is good, he may eat the greater part of a day-old lamb, but the stomach freshly distended with milk is his choicest tid-bit, it comes high in this day of five dollar lambs.

How many of us who do or have done the actual labor in the lambing season, have come into camp late in the evening after getting everything in the best of shape for the night, our bunches carefully flagged or lanterned, the night men with their guns, guarding the younger lambs which we have been unable to move, tired but contended, knowing things were going well and a record percentage seemingly on the way. How many of us, with the first streak of dawn, have been in the saddle starting on our morning's round trusting that another night has passed without the visit of our enemy, and how often have we been disappointed. Out on the hillside a ewe bleats pitifully, we know that bleat, it is not a call for her lamb, it is more of a wail. She knows her lamb is dead. We hurry ahead, unslinging the rifle from the saddle, but experience has taught us that it is of little use, how often have we hoped to catch the gray devils at their devastation and how often have we been disappointed. Where we left the band the night before, there is nothing but the flags hanging stilly against their uprights; a little breeze might have caused a tiny flutter sufficient to have aroused the suspicion of the prowlers of the night; our lantern is out from some cause; day has broken now, and below us we see the remains of a lamb mostly eaten; near it another, also eaten. We are now prepared for a killing, as there has been two or more coyotes at work, on a little raise there is a lamb with a ragged tear in its side, its stomach and heart eaten out; a little further on another and yet another, all mutilated the same way. Where the frightened ewes had crossed a little gulch there lies a lamb with a tear out of its side but that is all, the coyote had thought to regale himself on his tid-bit again, but his appetite had been satisfied and they had now cut loose for a frolic. Along the little ridge lay a lamb quite dead, its head bent under it where it had fallen when the coyote tossed it in the air, near it another, also dead but apparently unmarked, we know a bite through the brain has finished him. Behind a sagebrush we pass another, still feebly kicking, and we find the band in a little basin, and two or three of the lambs badly bitten. We know they will die, and just below a lamb bit through the head, bleating pitifully, but still able to walk around in a circle. We end it's suffering as painlessly as we know how, and hurry on to some of the other bunches knowing well the frolic will be repeated should the coyotes run on to them in their travels. A total of twelve or fourteen lambs out of a bunch of sixty, besides the damage caused by the scare of the little flock which makes them restless, some trailing off with one lamb to other bunches, leaving their twin behind to perish of hunger.

To many people unacquainted with the business, the idea of coyote killing, for killing's sake, is entirely new, but the woolgrower would gladly feed all the coyotes on his range, one lamb per day each, provided the rest would be left unharmed.

How many of us again have started out to seek for a little bunch of sheep, strayed from the main band, and have seen the devastation caused by coyotes, they chase and kill and scatter the little flock in all directions; torn carcasses dot the range, and a mutilated ewe or two may be all the stragglers we can get out of quite a good sized bunch which has gone amissing.

How many of us, in the dead of night, have heard the sudden rush of the bedded band, on the first appearance of the coyote, followed almost immediately by the wild stampede, as he charges to cut off a ewe or a lamb, which when cut off is headed down hill in a wild run, to be suddenly stopped when the teeth slash the throat. It may be a quarter, it may be a mile from the band, depending on just how good but fruitless a run the sheep made for its life. This may be repeated two or three times during the course of the night, such losses being generally unaccounted for when the band is next counted.

Like the poor, the coyote is always with us, on the lambing range, on the summer range, and on the winter range, day and night, he is watching his chance, and his chances are many. Let a little bunch stray off, or the herder get careless, and a choice lamb or a prime mutton is gone from the nation's bill of fare, and the coyote is a good judge of mutton. There are times when he will be forced to eat just what he can get, but as a rule, it is the best which is killed.

The actual destruction of live stock is not the only loss caused by predatory animals. The cost of handling is increased three or four times and in this western country, the wages paid to our help is higher than paid for the same labor in any other country. Consequently, that item itself, is really enormous. In sections where predatory animals are numerous, ten men are required for a lambing band of ewes. Were it not for the fact that predatory animals exist, three or four men could easily do the work required, and the trouble is that the extra work done by the extra men is really a loss, as the simple movement of a few ewes with young lambs by inexperienced help, is certain to result in a loss of lambs.

It is sometimes a question whether to let the coyote have his fill, or lose by mixing up bunches to try and protect them from him.

It would naturally be supposed, that the extension of settlement on the range would drive the predatory animals out, this is not the case, however, with the coyote, as he



seems to live on civilization, where he used to depend on the elusive jack-rabbit or diseased salmon along the river banks. He now has young chicken or turkey, and is it any wonder that now, litters of young, numbering ten or twelve, are met within a thriving condition. When the female coyote had to depend on jackrabbit for a living, it was seldom that over two or three young were raised, and where the salmon along the river banks formed the staple food, the coyote invariably contracted an extremely virulent form of mange, the first few really cold nights in winter, killing them. Now, however, the poultry yard of the settler provides the chief sustenance for the coyotes which do not follow the bands of sheep into the mountains, and poultry raising is seriously menaced in some localities. Some settlers who are troubled with the loss of their crops with jackrabbits, often complain of the destruction of coyotes. A single coyote may catch a jackrabbit, but the rabbit is a sick one, or a young one, or one asleep; and two or more may accidentally corner a full grown jack, and get him, and in deep snows, we have seen jackrabbits killed by coyotes, but the good done in this direction is so infinitesimal, compared with the damage done in other ways, that it should never be considered.

Until the last few years, the percentage of loss on the summer range, was much lower than during the other seasons, but now the coyotes seem to be increasing in both numbers and destructiveness within the national forests, and on my own allotment, this year, several young coyotes were killed.

The settlement of the range, while providing the coyote with a better food supply, has unquestionably restricted his breeding ground, thereby driving the female at the breeding season, to make her den in the more unoccupied portions of the country.

And while not criticising the withdrawal of large areas of land for national forests, national parks, reservoir and power sites, etc. These areas, not being open to settlement, provide the very best kind of a breeding place for the coyote, from which she issues to take her toll on the occupants of the surrounding country, whether it is the poultry of the settlers, or the ewes and lambs of the woolgrowers.

Let us look at the area withdrawn from settlement for all time in the states of Washington, Oregon, California, Arizona, New Mexico, Colorado, Utah, Idaho, Wyoming, Montana and South Dakota, comprising practically the whole of the western range country, what do we find:

	Acres
National forests .....	135,602,892
National parks .....	4,435,143
Game reserves .....	1,492,928
National monuments .....	1,962,012

Power sites .....	1,991,285
Reservoir and water reserves .....	221,097
Making a total .....	145,705,357

to which can be added:

	Acres
Unallotted Indian land .....	32,909,108
Oil land withdrawn .....	4,228,513
Phosphate land withdrawn .....	2,750,294
Potash .....	225,989

Making a total .....

145,705,357  
40,113,904

Grand total .....

185,819,261  
To this also, we might add 41,041,660 acres of coal land withdrawn which while open to settlement, still is not eagerly sought after, as the title is for surface right only, making a grand total of 226,860,921 acres.

One might almost say the government was in the coyote raising business, providing such immense areas as breeding ground for predatory animals. Scatter those areas in the several states and place the settlers and stockmen with their poultry and herds around them, as they are, and you have a breeding ground and a food supply. What more can the coyote ask for?

In my own state, the state of Idaho, where we raise the finest lambs in this whole great country, we find withdrawn, a total of 17,712,000 acres of national forests alone and while in complete accord with such withdrawal, is it reasonable for the government to maintain a breeding ground for predatory animals at our very doors, and do nothing towards their eradication.

I believe the Forest Service of all the government departments, has a more thorough understanding of our business, and its importance to the country, yet it collects its revenue from the resources of our state, and turns it into the national treasury, remitting 25 per cent of the gross receipts for road and school purposes only; 25 per cent more should be turned back for the destruction of predatory animals, as the forests are a menace to the surrounding country in that respect.

The payment of bounties, is the only feasible system for the destruction of predatory animals, and with such payment being made for some particular part of the body by all states and associations, the danger of fraud, which is the chief complaint, would be eradicated.

Where the scalp is accepted in one state, the feet in another, the lower jaw in another, fraud undoubtedly is practiced, but with the meeting of the state legislatures this winter, an effort should be made to standardize the part on which payment will be made.

In the state of Idaho, today, the payment of bounties has been stopped by court order, and trappers are employed in some localities by the state at \$3.50 per day. These trappers are required to kill one coyote per day, to hold their positions. Formerly \$1.50 bounty was paid per head, now, under this system, it requires \$3.50.

With the market for furs demoralized, and no bounty being paid, the woolgrowers find themselves in a serious predicament, as where there were formerly trappers all over the country, now there are but the few employed by the state.

I cite this as an argument in favor of the payment of bounties, and that bounty should be provided by both national and state legislation.

Do not get the idea that with the favorable conditions and high prices prevalent this year, the woolgrowing business has become a bonanza. The cost of production with the restriction of the range by settlement, has increased proportionately, the expense. The hold taken by predatory animals is distinctly on the increase, and prices which a few years ago seemed high, would not now sustain the business.

The land policy of the government is sending the western woolgrowing industry fast downhill. The toll taken by predatory animals is hastening it along.

I heard it stated in Washington, by one of the representatives from the west, that the west was made by the homesteader. I disagree to a certain extent, with that assertion, the stockmen had their share in the making, as they have this year in the saving of our western country.

I heard that same representative state the land policy as viewed by the politicians in Washington, "Much of the country was open for three hundred and twenty acre homesteads, when that was not sufficient, it would be increased to 640, if necessary, to 1,280 acres." To the man unacquainted with conditions it sounds magnificent. It may be the best policy, as it eventually will lead to the ownership of lands by large companies, and one man owning 1,280 acres can be much easier dealt with than eight owning 160. Then with the land question settled, the extermination of predatory animals can be more effectually dealt with.

At the present time, when a three hundred and twenty acre homestead in the middle of your lambing ground, may seriously embarrass you, or two or three such homesteads may completely close you out, it has become the policy of all woolgrowers to retrench in every possible way and what is the use of one man being at the expense of fighting predatory animals when there is no systematic effort of dealing with the country at large.

We may not be a legitimate industry, but

we are a very necessary industry to this western country, and I would ask assistance in our fight with the predatory animals from our Federal government. If they will not take our word for the losses we sustain, we extend to them a cordial invitation to send men to our lambing grounds to see for themselves.

With the predatory animals exterminated and our ranges secured to the user, with our flocks in a country where internal diseases and parasites are unknown, we can defy competition from any known country where sheep are grazed.

### DEVELOPING WATER ON GRAZING LANDS.

How a range which ordinarily cannot be grazed because of inadequate water facilities can be opened up for stock, is told by the department of agriculture in Farmers' Bulletin 592 on the development and improvement of stock watering places upon national forests.

No stock range can be said to be properly utilized, the department avers, if there is an uneven distribution of water. On some areas the water supply is not sufficient for the number of stock the forage will support. On others the water supply is sufficient, but is not permanent, making it necessary to remove the animals before the season is over. Still other areas are made practically worthless for stock purposes by the absence of water except at rare intervals during winter.

Range cattle need from 8 to 10 gallons of water a day, says the department, and sheep from one-half to two gallons, unless there is heavy dew and an abundance of succulent feed. No matter how good the forage on a given area may be, animals must have all the water they need or they will not thrive. Cattle, moreover, should not be required to travel on an average more than two miles to reach water, if they are to be in marketable condition in the fall.

The flow from ordinary springs, and even from seeps, can be increased by digging them out and curbing the sides with cement, the water being carried in pipes to conveniently situated troughs. Swampy spots can often be

made to furnish a water supply by cutting an open channel from some spring in the middle of them, perhaps cutting other channels across the main one, and drawing the spring and surface water to some storage point outside. Streams flowing through deep canyons may be made accessible to stock by constructing trails over which the animals can reach them, or by raising the water to the surface of the canyon by mechanical means.

When a natural water supply is some distance from the range, small dirt flood-water reservoirs can be constructed almost anywhere to supplement the natural supply. If a low place with a heavy adobe or clay soil is selected in the middle of some open park with sloping hills about it, comparatively little work with plow and

## To Sheepmen:

**Your Congressman and both your Senators are now at home. The National Wool Growers' Association asks you to see them and explain the great loss the West suffers from predatory wild animals and urge them to work for a Federal appropriation of \$300,000.00 to be used in destroying these animals.**

scraper will construct a reservoir which, when trampled and puddled by use, will hold enough water for many head of stock for some time. Furrows running diagonally across the slopes will collect the rainfall or melting snow waters and carry them directly to the reservoir for storage. Artificial reservoirs permit the stock to be scattered out over a larger area than ordinarily, and remove the need for them to concentrate at permanent watering places.

Where the natural water supply is more than 50 feet below the surface of the ground the best way to reach it, says the department, is by drilling or boring a well and raising the water by means of a windmill or pump. A deep

well of from 150 to 300 feet, such as is common in the Texas Panhandle region, complete with windmill, truck, troughs, etc., represents an investment of about \$1,000, and should easily supply between 350 and 500 cattle daily. No well is complete, claims the department, without a reservoir with a capacity large enough to carry the stock dependent upon it over a long calm spell. The cost of a reservoir holding approximately 200,000 gallons of water should not exceed \$100.

The best kind of trough for holding water derived from wells and springs, thinks the department, is the ordinary metal one used by stockmen. It is light in weight, will last a long time, and costs little. However, where the materials are readily available and the cost of cement is not prohibitive, the department recommends concrete as better than any other trough material.

Work has been done on the national forests to improve the water facilities on the range lands. In all a total of 676 separate water improvement projects have been developed, 329 by the users of the range themselves, 172 through co-operation between the forest service and the users, and 175 by the service alone. Of these 676 improvements, 378 are springs or seeps, 286 are reservoirs or tanks, while the rest are wells, trails, and the like.

### WOOL PREPARATION,

At our Annual Convention the matter of wool preparation was fully discussed. The conclusion reached was that the National Wool Warehouse had clearly demonstrated that the best system of preparation for American wools would simply be to grade the fleeces and then bale the wool.

While the Australian system may suit Australian conditions, it seems unsuited to our needs. Anyway, American wools that have simply been graded command a higher price in the eastern markets than do Australian wools that have been classed and skirted. American manufacturing needs are different from those abroad and our manufacturer desires to have the entire fleece intact.

If our own growers will start in by grading their wool they will meet the needs of this country. This is the plan we are going to advocate.



## Winter Feeding on the Range

Address by H. C. WOOD, Spencer, Idaho

**M**R. PRESIDENT, Ladies and Gentlemen: I don't know how it is that they picked me out to make this address and I have tried to dodge them from year to year, but somehow this year I could not.

Now, I don't feel that I know any more about this winter feeding or as much as most of the sheepmen here in this Convention, but what I am quite certain of is the fact that we have learned a wonderful lot about our business.

For a number of years past, up until the last three years, our winter losses would aggregate from 7 per cent to 10 per cent and under our new system we have cut these losses down to 2½ per cent to 3 per cent. Three per cent is about our average loss on the winter range. Of course, that includes the lambing loss.

I will try and outline to you just as briefly as possible how we take care of our sheep in the winter.

In the first place, I want to state my views on this compulsory dipping. I think the poorest preparation for the winter is a dip, unless it is absolutely necessary. For you all know the results that dipping has on sheep, especially in the fall of the year when shipping and classing up your herds for winter. I never dipped a sheep in my life but that it took from one to three months to get it to where it was when I started dipping, and if your sheep are ticky, you have to dip them again any way.

I find that in the winter time, and of course I am speaking for our own particular locality, that the ticks are probably gone any way. We use machine shears and that is possibly a good way to do away with them.

I trust this convention will go on record as absolutely opposed to any such radical measures as the compulsory dipping.

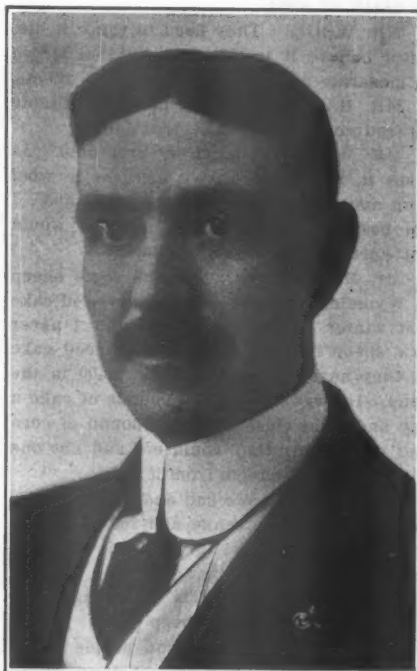
The first thing I do is to grade the sheep before sending them on the winter range. I put all the Merinos together and all the other grades together, as it is pretty hard to winter sheep together when some are of a wandering nature. The Merinos are a more contented sheep and are easier to handle. Where it is possible I would advise any man to grade his sheep before sending to the winter range. A great mistake we used to make, we would send thin sheep on the winter range to fatten them and that is a pretty hard thing to do. Cut out all thin stuff and those that have had a hard summer and send only healthy, strong sheep on the winter range.

The feed we use principally is cotton seed cake. We get this cake in nut size.

Screened nut cake is what they call it. It is a thing you want to be very careful about and get it in the nut size. If you get the pea size they will waste it. Of course, it is not a good thing if you are feeding in troughs.

I always go out to the range with the cake early in the fall so that it will be placed around within fifteen to twenty miles. We have a supply of this cake for each sheep outfit.

The principle reason for having the cotton seed cake out on the range early in the season is that when the weather gets bad you cannot always get it to the range.



H. C. Wood

I think one of the most important things is taking care of your sheep during the breeding season and as a rule December is a month that is very bad for ewes. We have rams that give up and the sheep become discouraged and disheartened during the first storms, which are almost always worse than any others.

I start to feed this cotton seed cake at the rate of about 1½ oz. per sheep just at breeding time, that encourages the rams and the flock also. If you once start to feed this cake you will have to keep it up all the winter. It is not wise to take it away until the green grass is on the range in the

spring; 1½ ounces does not seem very much. It is sort of a light product and keeps them eating quite a while.

In feeding this meal I have tried several ways. It is a hard thing to do when you have one man to a herd. They are always running for it, just like they would for salt or any grain you might scatter, consequently, you must devise some means of scattering your cake.

We scatter the cake about three-quarters or a mile from the camp and let the sheep feed on it. The plans we have adopted are—we have a camp together with two herders on the winter range and we have those camps so situated that one herder can scatter the first feed early in the morning before the sheep are starting and he will go back in time and scatter the other herders' feed while he is herding his sheep on the bed ground and the sheep all get their proportion of it.

As the weather gets worse and the winter advances, increase the feed to 2 ounces or 3 ounces. We have fed in connection with this cake 2 pounds of hay when the country is entirely snowed up. We had two feet of snow on our ranges and two pounds of hay is all the sheep required and two ounces of cake. They were stronger in the spring than they were in the fall.

In Montana last winter to show the benefits of this cake, I made a test as compared with other feeds. The conditions were very peculiar. There we had plenty of water, but the winter was very cold and very little snow fell, and the lower ranges were all eaten off and when the hay was sent, they had no water on account of having no snow. I put a couple of bands of sheep down on the hay bottom and fed them two ounces of cake with the hay and they would not keep up at all on account of lack of moisture. I put them back on the snow line and fed them three ounces of cake and you could see them climbing. They went through the winter in fine shape. It would be absolutely impossible to take that hay and haul it to the mountains and feed these sheep. The cake being light and easily handled, you can take it anywhere. We always used to feed half pound of corn, but when you get out on the range you cannot handle corn, it is too bulky.

**MR. WIGGS:** Did cotton seed cake ever cause slipping of the wool?

**MR. WOOD:** Now, that is something I cannot tell you. It does no harm as far as I know. We tried it on hogs and it killed about 250 for us.

Our cake cost us this year on an average of \$34.00 a ton, about \$7.00 cheaper than last year.

MR. FERGUSON: Where can you buy this cotton seed cake?

MR. WOOD: Kansas City Feeder Supply Company is where we get our supply.

SECRETARY McCLURE: How many car-loads do you feed a year?

MR. WOOD: About seventeen.

MR. FERGUSON: Do they eat this cake in troughs?

MR. WOOD: No. We scatter it right on the ground.

MR. FERGUSON: Is it hard on their teeth?

MR. WOOD: No. I do not think so. They seem to swallow it one day and chew it the next.

SECRETARY McCLURE: Have you noticed increased wool crop when feeding mutton stuff?

MR. WOOD: They sheared two pounds more than they used to when we handled them in the old way without any feed except hay.

MR. WOOD: Our feed used to cost us more money than it does today. We have about one thousand tons of hay, about fifty or sixty miles from the sheep and when they could not rustle any more, we would drive them down to this hay, but very often it was too late when we got them there. Our wool crop had already been destroyed. There was no strength in it and we had a correspondingly large loss.

Lots of people might attribute this to the wild animal loss, but it was on account of the poor wintering of these sheep.

I am very safe in saying that our lamb crop is 15 per cent greater than it used to be, and we have cut our loss down wonderfully, simply by caring for our sheep better.

MRS. YEARN: Do you feed all your sheep all the winter?

MR. WOOD: We feed all the sheep all the winter. That is, we scatter the cake all over the range where the sheep are herding. If any weak ones show up during the winter we have always had wagons fixed up to haul them to the headquarters ranch.

MR. ALEXANDER: Is this cake in the raw state or is it a preparation?

MR. WOOD: The cotton seed is first ground and in pressing the oil out of it, it forms into big, hard cakes. These big cakes are almost as hard as rocks and then they are broken up into irregular sizes for feeding or else ground fine for feeding as a meal. There are several sizes; the fine meal, the pea size and the nut size. We always get the screened nut size for feeding on the ground.

MR. FERGUSON: What kind of ground

do you feed on? Bare ground or sagebrush?

MR. WOOD: We have very little sagebrush and if fed among the sagebrush I thought they would waste it.

We feed this meal at Menan, Idaho, where we have our invalid sheep. We have plenty of hay for them here.

—: How do you feed this cake when it is very muddy?

MR. WOOD: We feed this cake in connection with the hay. This is the muddiest country in the world and it is wonderful how they will follow it down into the mud.

MR. FERGUSON: You feed altogether about four months?

MR. WOOD: They will naturally quit it in the spring when it is warm and there is plenty of green grass.

MR. FERGUSON: Has it any ill effect on cattle or hogs?

MR. WOOD: They used to think it did, but I believe it is being shown that if fed in moderate quantities there is no ill effects.

MR. BACON: Do you find it profitable to feed cotton seed cake that long?

MR. WOOD: Yes. Very profitable. As I see it, from the relative increase in wool crop and lessening of the loss of lambs. I am positive that four ounces a day would not hurt those sheep a particle.

Mr. Bigelow, of Ogden, has some sheep in Wyoming. He got some cotton seed cake last winter. They are doing fine. I never saw sheep improve so on cotton seed cake as they have. They had about 2,500 in the band. He was feeding 400 pounds of cake a day and right close to half a pound of corn and all the hay they could eat and not one suffered any ill effects from it.

MR. BACON: We had about 10,400 ewes last winter on the range and fed them cotton seed cake and three and one-half pounds of hay.

MR. WOOD: There is one thing about this starting to feed sheep early in the winter. I am satisfied if you people would do that and never let them get down where they needed it you would have a hardy, strong sheep and there would be a healthy clip of wool with no breaks in it at all.

Here is the proposition; in the summer nature provides the feed for the sheep, but in the winter it has come to that point where we have to provide it ourselves. It is just as essential to have the sheep well fed in the winter as it is in the summer.

Mr. Ormsby wants me to tell you that it is the finest feed in the world to winter lamb on. He has tried it. We do no winter lambing. He will be able to give you some good information on that, as a lot of you will be interested in it.

MR. ALEXANDER: Is it cheaper than alfalfa?

MR. WOOD: Yes. We have found it much cheaper.

MR. WOOD: Unless your sheep are very strong and very thrifty you are going to lose them. I have tried this and I know just what I am talking about.

When you start from the feed ground and by the time you get to the lambing range, a distance of about forty-five miles, we would lose as high as 25 per cent. It is the old ewes I am talking about. We wintered them on alfalfa hay and they looked fine. We have lost as high as 25 per cent of that stuff before we got through lambing.

In continuing this system we have cut down on the hay we used to feed these ewes. We gave them two or three ounces of the cake and that loss is absolutely eliminated.

MR. FERGUSON: What combination or proportion of cotton seed cake and hay would you give a 125-pound ewe?

MR. WOOD: That is a pretty good-sized sheep. I would give her two pounds of hay and three ounces of cake.

MR. MIRACLE: Have you experience in fattening stuff for market?

MR. WOOD: Only lambs. I kept a lot of this meal along in the troughs and all the hay they could eat and they then learned very readily to eat it. These were very inferior lambs. Little fellows.

MR. MIRACLE: Is there much danger of over-feeding the cake?

MR. WOOD: I don't think there is any bad effects from it. I had a band of 3,000 old ewes weighing about 100 pounds each and fed them about 1,000 pounds a day and found it very satisfactory.

MR. FERGUSON: I would like to ask if there is anyone in the audience who has had experience of feeding sheep, during lambing?

MR. ORMSBY: I would like to say that my experience on these lines has been the same as Mr. Woods. I winter lambed quite a few ewes last winter. I had two bands of ewes that I experimented with, using this cake. I had one band of ewes that I fed from 1½ ounces of the cake and two pounds of hay. I had another band that I did not feed any cake and fed five pounds of hay to the head and the ewes that I fed hay and cake outsheared the other ewes two pounds and I got eight per cent more lambs than I did from the band fed straight hay.

I do not think a man takes any chances in feeding the cake in any way. It is not necessary to feed so much as some people do and this cake will do almost anything for the sheep, the only thing it won't do is to put teeth in their mouths.

MR. PHILBRICK: How long before lambing do you begin to feed?

MR. ORMSBY: With some two or three bands I begin along in December, about the



10th of the month, with some others I begin a little later in the season.

I am a good deal like Mr. Wood, a man does not want to let his sheep get down in the fall of the year. If I should have to do without one or the other, I would rather do without the hay. When they are in close confinement they must have some coarse food with it. I have fed as high as a pound a head to some ewes for the purpose of trying it.

MR. MIRACLE: Do you have any trouble in getting the sheep to eat it?

MR. ORMSBY: I have trouble to keep them from eating it. It takes lambs longer to learn to eat it. I put it in little troughs. They will go there and smell it, and after three or four days they eat it.

MR. WOOD: I thank you, ladies and gentlemen, for your kind attention.

## Our English Wool Letter

Unparalleled Demand for Crossbreds.

(Specially written for the National Wool Grower.)

Bradford, October 24, 1914.

TWO events stand out prominently in connection with the wool and textile trade of Great Britain during the past month, and it is doubtful will live to see a repetition of what has if the present generation of wool men transpired. First, we notice an unparalleled demand for the crossbred wools of New Zealand; and second an unprecedented rise in the price of same. We have known both booms and slumps in the Colonial wool trade, and well remember the "sky prices" of 1889, 1899 and 1907, but never in the history of the trade since 1872 have New Zealand crossbreds realized the high figures seen during the first week in October. Of course there have been exceptional circumstances, and in keeping with same, prices paid for New Zealand crossbreds cannot but surprise many readers of this issue. Our remarks apply here more particularly to slipped crossbreds, that is wool that has been removed from the skins of killed sheep. It is really remarkable what an extensive business this has become, but when one thinks of the millions of frozen carcasses of sheep and lambs which the Dominion is now yearly exporting, he will see the im-

mense business that is being done in this class of staple. We say unconditionally that these wools are being sent to market second to none in the world, and certainly the wools are today enjoying their maximum of favor, never before having been exceeded either in price or popularity. The only regret that we have is that instead of the trade being confronted with a mere skeptical of slip wools, that there were not available 25,000 bales, for at this moment the trade could have lifted such a weight, and they would have come as a real godsend to the entire industry. Of course, the usual thing has happened, namely, that the very wools that are most wanted are the scarcest, but this is one of those phenomena which baffle the ability of men to define.

### Sales Results.

We feel we must summarize the results of the short series of sales which have been held from October 6 to 10. There were only about 46,000 bales available, and withdrawals have not been very heavy, though we certainly would have liked to see less Merinos taken in. But when a large quantity of second-hand lots have cost pence per pound more in the Colony than what was bid for them withdrawals are certain to take place, for it is a big task on the part of owners to accept the inevitable and face a serious loss which they may have to do before they got rid of their wools. Merinos were bound to decline, but from the very first to last good shafty 60's to 64's wools when well-grown and sound have not made any serious loss, the decline being well covered by 10 per cent, but when we come to the short, mushy, and faulty wools, the decline is from 15 to 20 per cent. We consider that good scoured combing Merinos have lost an all around 4 cents to 5 cents per pound, while faulty scoureds when somewhat tender, seedy and burry, have lost ground anywhere up to 6 cents. We know that such an announcement will not suit some, but we contend that if the facts are there and they can be substantiated, then it is best for all sections of the trade, in-

cluding growers, to know what actually transpires, and this decline has been accentuated by the absence of buyers from both France and Germany. We heard one of the principal selling brokers say after their auction in the middle of the week that scoured Queensland wools which they were trying to sell and which on several lots of pieces they had bid 31 cents and 32 cents, these very lots would have made in July 41 cents, in fact, some of the wools have had to be passed because they could get no bid. Cape Merinos have also lost ground all round 3 cents per pound for the grease, and 25 cents for the scoureds.

When we come to crossbreds, a very different tale has to be told. They began with making "balloon" prices and the series ended with the self-same thing. Some said on the opening night that placing an embargo on the export of crossbreds would help to bring down values, but we said emphatically "no." Why should they? Anyone with a practical knowledge of the present state of the woolen trade and the boom which is being enjoyed by the manufacturers in the West Riding of Yorkshire, South of Scotland, Ireland and West of England, could not reasonably expect to see crossbreds ease much, and the marvelous record of the opening night has to be chronicled at the finish. Of course, huge orders have been taken for khaki serges, blankets, rugs, etc., all of which means a huge consumption of crossbreds, and many asserted that the 25,000 bales available are only sufficient to satisfy requirements for the next few weeks, so great is the consumption which is proceeding. The series finished with prices at the highest point for crossbreds, practically all buyers regretting that the auctions were not being continued one week more, and so give them their fill.

### Why Slipes Are Wanted.

The reader may well ask why pulled lambs wools are wanted, and the same question applies to greasy lambs wool. We should have mentioned in the foregoing paragraph that greasy lambs have also advanced 20 per cent, and New Zealand seedy lambs that would

have fetched no more than 20 to 21 cents last series, have this week been selling at 26 cents, and this in face of no competition from one important buyer who every series purchases very big quantities for both France and Belgium. These crossbred lambs suit the production of khaki sergès admirably. And why? For the simple reason that they are just the quality wanted, they are also just the length required by the carding machines of the woolen trade, and third, because of the soundness of the staple. Here are three most important characteristics which are required in the production of almost every class of article required today by British soldiers on the battle field. Lambs' wools behave differently in the process of carding, spinning, weaving and finishing from low fleece wools, lambs producing a distinctly better handle than can be obtained out of fleece wools. Then too the latter are too long in staple to be successfully handled by woolen manufacturers, fleece crossbreds being infinitely better suited for combing purposes, hence lambs are being bought up in a manner that has never known a parallel. At the fifth series of sales a year ago tremendous weights of slipped crossbred lambs were available, but this series they have been exceptionally scarce, and it is really wonderful to have seen the big prices which have been made. Just to illustrate our point, we give below a few particulars, the accuracy of which we can vouch for, all slipped and washed New Zealand wools that were withdrawn at the July sales and reoffered at the fifth series of auctions, and we think the reader will agree that the rise shown marks a record in the history of the Colonial wool trade:

Description.	bid. July	sold. Oct.
Washed crossbred lambs.....	\$ .25	\$ .36
Washed crossbred pieces.....	.19	.31
Washed first crossbred.....	.22	.29
Washed first crossbred.....	.23	.30
Slip three-fourths bred.....	.24	.33
Slip three-fourths bred lambs .....	.25	.34
Washed crossbred thirds.....	.18	.27
Scoured crossbred pieces.....	.22	.30

Scoured one-half bred pieces .....	.24	.34
Washed crossbred thirds.....	.19	.29
Slip crossbred comb sec- onds .....	.17½	.26
Slip crossbred lambs sec- onds .....	.20	.28
Slip crossbred lambs sec- onds .....	.20	.30
Slip fine crossbred comb.....	.26	.35

#### The Present Boom.

This article cannot be concluded without stating that the textile trade of Great Britain is enjoying a boom which the piping times of 1872 fall a long way the rear of. There are still living a few old members of the wool trade who well remember the boom which succeeded the Franco-Prussian war of 1870, but they say that today's boom eclipses that of 1872. Every spindle and loom that can at all manipulate crossbred wool is doing so, women and girls working in woolen factories up to 8 p. m., a large number going day and night where employees are available. Of course, it is all in the production of fabrics required by the British and French troops, and many firms have orders on their books which will take them for the next five months to execute. All this means a continuous large consumption of crossbred wool, hence it is to be hoped that New Zealand will send forward her new clip wools with all possible speed. We believe that the government has to a large extent monopolized shipping both in New Zealand and Australia, and that small cargoes must be looked forward to for some time to come, but it is imperative that the home trade be supplied with the requisite materials, otherwise manufacturers can never turn out the fabrics required to bring the war to a successful issue. As we look forward to prices, we certainly think that crossbreds bid fair to remain intact. Of course they are inflated, but as long as the war lasts, we cannot see where cheaper crossbred wool is forthcoming, and this should be a hopeful sign to New Zealand pastoralists in particular.

#### The Government Embargo.

One of the most memorable an-

nouncements ever known in Coleman Street Wool Exchange was made on the opening night of the last series of London sales. Two minutes before the sale began the selling broker in the rostrum read out a notice from his majesty's government to the effect that wool exports were only allowed to Allies and Spain and Portugal. Shipments to the Baltic ports of Russia were also forbidden. With this also came the information that the prohibition might be extended at any moment. Later in the afternoon, it was announced that exports to all countries were forbidden. This seemed rather too sweeping a decision and many purchases had been made for France that afternoon, one of the buying brokers whose clients are French protesting. However, the next day the announcement was made that if satisfactory information were given as to final destination, the shipments of Merino wool and tops would be allowed, but all crossbred wool, tops, wastes and noils were forbidden. That is the embargo as it stands today. Much grumbling is heard against it, and much satisfaction expressed with it. It certainly seems foolish to allow crossbred yarns and cloths to be exported, while tops and wool are barred. The embargo is to conserve supplies of crossbred wool for our own manufacturers, especially for military cloths, and to prevent Germany buying suitable wool in England for her soldiers' clothing, as it is an open secret she has been trying to do. But Germany would as soon have suitable yarns as wool, for the cloth would be half made, and the price is a minor consideration.

Editors Note—Since the above story was written wools have continued to advance in price in London.

#### NEW SUBSCRIBERS.

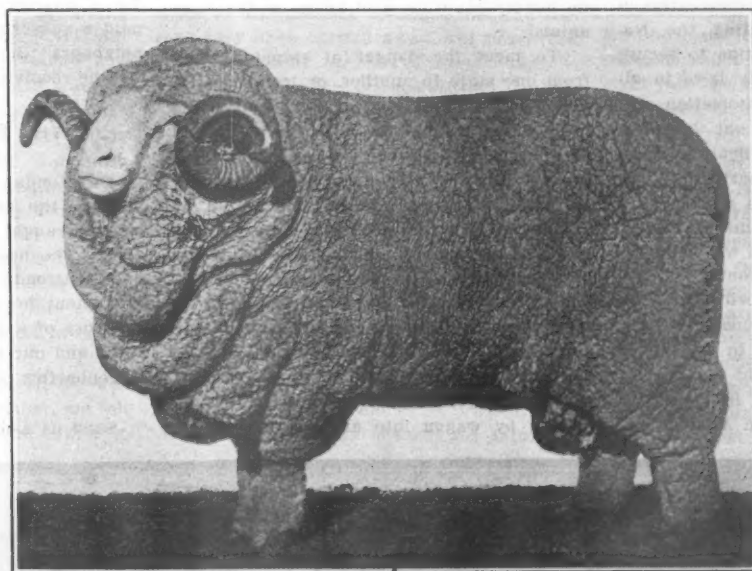
During the past month Mr. F. A. Ellenwood of California has sent us 332 subscriptions to the National Wool Grower. If only a few men would follow Mr. Ellenwood's example the National Wool Grower would soon be in the hands of every Western sheepman. It already reaches more sheepmen west of the Missouri river than any other sheep paper.



# WOOL AND MUTTON

## From the Same Sheep

Do you know that the big, smooth Rambouillet ewe is the most profitable range ewe for the western country? She will live five years longer than the cross bred ewe and the death loss will be decidedly less, she can also be handled at less cost. All these elements enter into your profits.



An Australian Ram that sold last year for \$8,500.

This big Australian ram is just our Rambouillet with a dash of Spanish Merino in him. The Rambouillet leads the world when wool and mutton are the consideration. If you use Rambouillet rams this fall your prosperity is assured.

---

### American Rambouillet Sheep Breeders Association

R. A. JACKSON, Pres., Dayton, Washington

DWIGHT LINCOLN, Sec'y., Milford Center, Ohio

**SALT BUSH.**

In a recent issue of the National Wool Grower, we published a story reciting the experience of a sheep man in Washington in feeding sheep salt bush. This story attracted considerable attention and we have had some inquiries relative to it. We desire to state, however, that at our last Annual Convention Washington sheepmen who have had experience with salt bush advise us that it is not a satisfactory sheep feed in this country; that sheep do not eat it readily, and that the plant is a serious pest. These Washington sheepmen are opposed to the use of salt bush as a sheep feed.

We merely give this information this prominence so that our readers may have both sides of the question.

**UNIFORM BOUNTY LAWS.**

At our Fifty-first Annual Convention a resolution was passed directing the National Wool Growers' Association to secure the passage of uniform bounty laws in all the Western States. The Association will make a strong effort to carry out this resolution, but it is going to be difficult to make these bounties uniform in all particulars, for at the present time they are not uniform in any particular. The amount of bounty paid on coyotes ranges all the way from 50 cents in Nevada to \$3 in Montana. Certainly Montana will not be willing to reduce her bounty, and it is equally certain that Nevada will not be able to raise hers to \$3.00, even though she ought to do so.

The bounties on coyotes in Western States are as follows: \$2.00 in Arizona and

New Mexico; \$1.50 in Oregon and Utah; \$1.00 in Colorado, Idaho, Texas, Washington and Wyoming.

Aside from the difference in the amount of bounty paid, there is also much variation on the part of the animal required for payment of the bounty. Wyoming pays on the lower jaw; Montana on the scalp, and Idaho on the front feet. Again, it would be difficult to get all these states to pay on the same parts. If all the states would pay on the front feet, and take these off the hide when the bounty was paid, the danger from fraud would be limited and the fur value of the hide not reduced.

I believe, however, that Mr. Spaeth of Gillette, Wyoming, has suggested a very simple way out of the difficulty, viz.: amend all bounty laws so that no bounty shall be paid unless the hide is presented with the scalp, skin of lower jaw, ears and front paws attached. If this were done certainly no bounty could be paid twice on the same animal.

To meet the danger of shipping hides from one state to another, or from point to point within the state, let the bounty laws be amended so that the railroads on receipt of hides would be required to advise the proper officer at the point of destination that so many hides of such a kind would be shipped by a certain person to a certain person on a given date. In this way shipments of hides could be traced, and with this possible we doubt if crooks would be willing to take a chance of shipping hides from one state to another. This would not, of course, meet the objection that animals killed on the border of one state might be carried by wagon into another state for

bounty. However, a coyote that is killed within hauling distance of the state line belongs about as much on one side of the line as the other. He would probably cross the line many times during the year, if he were let alone.

Of course there is not a great deal of fraud in the payment of bounties anyhow, when some does occur, it is given wide publicity and the public magnifies it greatly and uses it as a reason why all bounties should be repealed. To meet just this situation we need uniform bounty laws and all should work to that end.

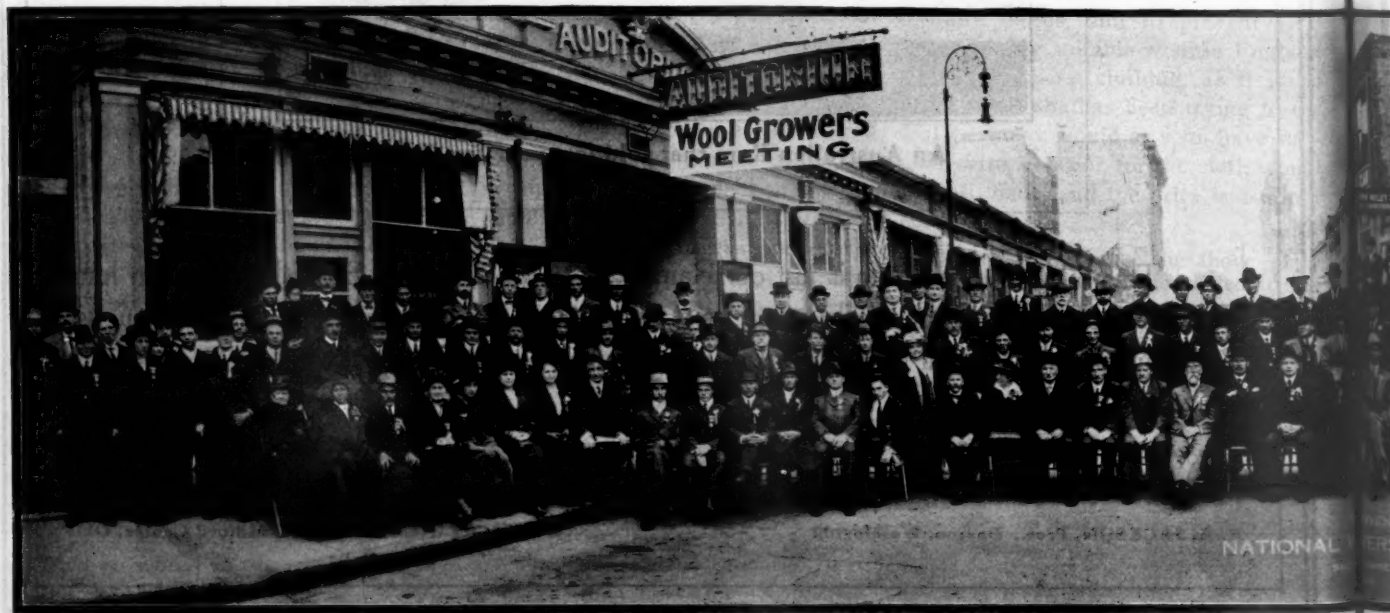
**THE NATIONAL WOOL GROWER.**

At our Annual Convention every one was enthusiastic about the National Wool Grower. We did not know that range sheepmen would become so enthused over anything. Men who have lived on the range for a quarter of a century came in and paid a subscription for four or five of their neighbors. Soon every Western woolgrower will be receiving this paper.

**THE PRESIDENT'S LOSS.**

On Monday morning, following the convention, the home of President F. J. Hagenbarth caught fire and was very badly damaged. The fire originated from defective flues. Already our president has made arrangement for the building of a new home. The loss of a home by fire is always a sad affair and our many readers will regret Mr. Hagenbarth's misfortune.

Send us a new subscriber.





# The National Wool Grower

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(Incorporated)

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Edited by the Secretary

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## OUR FIFTY-FIRST ANNUAL CONVENTION.

At the close of our Fiftieth Annual Convention last January we made the statement that it was the best convention the Association had ever held. Now the 51st Annual Convention of the National Wool Growers' Association has come and gone, and we are able to say that it was the best annual meeting the Association has ever known. Last year we had over 700 in attendance, this year about 450, but those in attendance this year were practically all sheepmen, coming in from every section of the range sheep country. The way to measure the success of a convention is through the results achieved and the interest taken in the proceedings. Guaged by this standard, it is going to be very difficult to excell the meeting just closed.

When the date of this meeting was changed from January to November, we felt some misgivings that this might result in

seriously reducing our attendance. However, now all doubt upon this score has been removed, and it is clear that sheepmen will attend this meeting at any season of the year, and a still better meeting can be held earlier, rather than later. Men and women come to this meeting to learn, and the lessons they have carried away will prove the best investment they have ever made.

On the floor of the convention, in the hotels and on every hand one heard the expressions, "the best meeting ever held," and "I would not have missed it for anything." The general feeling on this point is best illustrated by the fact that the convention amended its constitution so as to make Salt Lake City the permanent meeting place of the National Wool Growers' Association, and this move was made in the face of the fact that we were invited to meet at Frisco during the World's Fair and sheep show. On this page we publish a half tone showing some of the delegates present. Not all of them by any means got into this

picture, for it was taken after the noon adjournment, and on account of the delay many did not wait.

The picture was taken on the public street, and on account of lack of space, many who did wait do not appear in the photo.

Many of the long cut and dried speeches that have been usual at these meetings were cut out. The convention was distinctly one of discussion. Sheepmen from all parts of the west got up on the floor and asked questions and gave their experience. None felt afraid to speak and everything was informal. Much satisfaction was expressed at this phase of the convention.

Aside from the general discussions in the convention, one of its bright features was the magnificent wool exhibit displayed by the National Wool Warehouse & Storage Company. We know of many men who spent hours in going over it, and of those who went over it as many as three times. No one could examine it and hear the discussions about it without gaining a clear insight into the wool industry. Its effect will be noticed in improved clips in all parts of the country.

At the close of the convention all the old officers were re-elected and Salt Lake City made the permanent meeting place.

For the benefit of those who were not present, we will publish in the pages of this paper much of the discussion that took place. We are also sending copy of the American Sheep Breeder. This will help some, but those who missed the convention will needs have made much at home during those three days to compensate them for what they lost by not being present.



# HAMPSHIRE

On **July Eighteenth** the **Forester** on the Targhee National Forest weighed a draft of our **Hampshire** lambs on their grazing grounds; on **September Fifth**, just **fifty-four days later**, these same lambs were re-weighed showing a **gain of thirty-two pounds**, or at the rate of **six-tenths pounds per day**. What breed other than the **Hampshire** can make a like showing?

We have **HAMPSHIRE** of all grades, sexes and ages for sale

## HALF BLOODS

We have recently purchased 1,400 head of pure-bred **Rambouillet** ewes from the Cunningham Land & Sheep Co., of Oregon, and are importing pure bred selected **Lincoln Rams** for crossbreeding. It is our purpose to re-cross the resulting half-bloods from this combination with the **New Zealand Corriedale**, the best wool mutton sheep in the world.

Progressive flockmasters desirous of keeping their ewe flocks up the highest wool mutton standard will do well to keep this concern in mind when purchasing all purpose rams.

*FULL PARTICULARS AND PRICES FROM*

**WOOD LIVE STOCK COMPANY, Ltd.,**  
**SPENCER, IDAHO**

F. J. HAGENBARTH, Pres.

H. C. WOOD, V. Pres. and Mgr.

JNO. W. HART, Gen. Supt.



### EFFECTS OF EARLY AND LATE SHEARING.

As stated in the introduction of this bulletin, a secondary object in Experiment No. 2 was a comparison of the effects of early and late shearing on fattening lambs. For this purpose three additional lots, known as lots 4, 5, and 6, were selected. With respect to the proportions in which shelled corn and alfalfa hay were fed, the six lots were treated as three pairs of duplicates, as follows: Lots 1 and 4; 2 and 5; and 3 and 6. Lots 4, 5, and 6 were sheared March 19, one month after the experiment began; the other lots, Nos. 1, 2, and 3, were not sheared until May 21, near the close of the experiment. All the lots were shorn close by a hand-power machine.

Table 9 shows feed consumed, gain, and yield of wool per lamb.

#### Consumption of Feed.

In each duplicate the lambs that were sheared early consumed a little more feed than those left in the fleece. Until the last days of April, the unshorn lambs ate as much feed as the shorn lambs, but from that time until the close of the feeding period they consumed less than the shorn. The warm weather in May evidently had a depressing effect on the appetites of the unshorn lambs, for during that time they were much more difficult to keep on feed than were the shorn lambs.

#### Gains.

It will be seen from Table 9 that in total gains there was little difference between the early- and the late-shorn lambs except in the case of lots 3 and 6. Lot 6, sheared March 19, gained considerably less than lot 3, but the fact that one lamb in lot 6 was lost may have had an influence on the extent of the gains. However, it is interesting to note that in all cases, contrary to what would generally be expected, the lambs sheared late made slightly more gain than those sheared early. This may be explained by the presence of certain conditions that may have been in favor of the lambs that were sheared late. For example, much of the time from March 19, when lots 4, 5, and 6 were sheared, until about May 1, the weather was abnormally cold. Such weather had a visible effect on the shorn lambs, often causing them to stand shivering with their backs humped. It probably hindered them in making gains and at the same time aided those left in the fleece; at any rate, the unshorn lambs seemed the more comfortable, while the reverse would have been true during a considerable part of April if the season had been normal. Whoever decides to shear early is obliged to take chances with the weather.

Another condition that worked unfavorably for the shorn lambs was the manner in which they were penned.

Each lot was penned by itself in a small inclosure where there was no opportunity for the lambs to circulate freely. In a large shed each individual has an opportunity to move over the whole shed space and thus keep warmer than if confined to a small pen. Then, too, since each lot was penned by itself the lambs could not gather close together in large numbers. While lambs do not "bunch up," as pigs do in order to keep warm, yet western lambs stay pretty close together if given an opportunity. It is a matter of speculation as to how much gain the early-shorn lambs would have made if they had been handled in one large band within a warm, commodious shed or barn.

#### Yield of Wool.

Another very important consideration in shearing fattening lambs early or late is the amount of wool secured. In this experiment the difference in weight of wool varied from 2 to 2.75 pounds per lamb in favor of late shearing. These significant differences are based on the weight of the wool just as it came from the lambs and not on the weight of the scoured wool, that is, the wool fiber free from all extraneous matter. It is needless to state that the late-shorn lambs, having sixty-three days longer for growth of fleece, yielded a greater weight of wool fiber than those shorn early, though a large part of the additional weight was due undoubtedly to the presence of a greater amount of yolk (oil from sebaceous glands combined with perspiration). The wool from the late shearing was also longer in staple and more lustrous, these qualities adding to its desirability from the market standpoint. However, the local dealer made no discrimination between the early- and the late-shorn wool, and hence in this instance the time of shearing had no influence on the market value.

The difference in weight of wool in favor of late shearing had an important bearing upon the financial returns. The lambs sold for \$8.50 per hundred-weight on the Chicago market, or, on the basis of home weight, it was estimated that they brought \$8.25, the

Table 9.—Feed Consumed, Gain, and Yield of Wool per Lamb.

(Feed period 98 days, Feb. 19 to May 27. Twenty wether lambs in each lot. Approximate initial eight, 65 pounds.)

	Date of shearing.....	Proportion of corn to hay....	Total shelled corn per lamb, lbs....	Total alfalfa hay per lamb, lbs....	Total gain per lamb, lbs.....	Wool per lamb, lbs.....
Fed alike:						
Lot 1 .....	May 21	1 : 0.86	133.5	114.7	32.45	8.75
Lot 4 .....	March 19	1 : 0.85	136.8	117.0	32.15	6.30
Fed alike:						
Lot 2 .....	May 21	1 : 1.31	111.6	146.2	31.35	8.40
Lot 5 .....	March 19	1 : 1.31	113.1	147.8	30.30	6.40
Fed alike:						
Lot 3 .....	May 21	1 : 2.03	86.2	174.9	28.85	8.60
Lot 6 .....	March 19	1 : 2.03	86.7	176.2	23.97	5.85

Note.—One of the lambs of Lot 6, Experiment No. 2, died during the second period, making the average number of lambs during that period 19.36, and during the third period, 19.

shrinkage being very slight. The wool was sold locally for 25 cents per pound. At these prices the returns from the various lots were as shown on page 79.

In every instance the difference in financial returns was in favor of the lambs shorn late. This was due to the greater weight of wool secured rather than to the difference in the weight of the lambs, for, with the exception of lot 6, in which one lamb was lost, the early-shorn lambs outweighed the late-shorn lot when ready for market. Since the lambs sold for an abnormally high price per hundredweight, the heavier weight per lot was all the more in favor of the lambs shorn early.

A comparison of lots 1 and 4 shows

that the returns per lamb were 42 cents in favor of lot 1 (sheared late). To offset this difference, due to the greater wool value of lot 1, the gain in lot 4 would have had to be a little more than 5 pounds per lamb greater than it was. The same is true in a somewhat less degree of lot 5 when compared with lot 2, and in a greater degree of lot 6 when compared with lot 3. The significance of the advantage secured in financial returns from late shearing is apparent when it is realized that lots 4, 5, and 6 would have had to gain approximately 16 2-3 per cent more than they did in order to have overcome the greater returns in lots 1, 2, and 3.

fore they were marketed, while lots 4, 5, and 6 had been sheared about seventy days, and in that time their wool had grown to sufficient length to make them look more rounded in form, less ungainly, and apparently of better quality than the lambs just lately turned out of their fleeces. But buyers on the market said that although the difference was very slightly in favor of the early-shorn lambs, it was too slight to make a difference in the market price. The only difference to the buyers was that the early-shorn lambs had pelts with more wool, which, although very short, was worth a little more per pound than the dressed carcass. In times of low prices for wool, a seventy-day growth would probably be of no more value pound for pound than the carcass.

In summing up the effects of early and late shearing on fattening lambs, it may be said that under the conditions existing at the time of this experiment it was better not to shear the lambs until near the close of the feeding period. This was because the late-shorn lambs consumed slightly less feed, made a trifle more gain, and returned considerably more net profit on account of the greater weight of wool produced. The writer does not attempt to say, however, that this one experiment conclusively answers the question as to whether it is advisable always to shear fattening lambs late in the feeding period, for there are many different conditions, each of which, if handled most skilfully, would require different treatment.

Many practical feeders advocate shearing fattening lambs early in the feeding period, their chief arguments being that shearing stimulates the appetite and results in a large rate of gain. The results from the experiment under discussion tend to support the first argument but not the second. The writer is not disposed to refute either, for, as already pointed out, the conditions of this experiment were different from what they often are when a larger number of lambs are fed together and in a normal season. However, the results

#### Fed alike:

Lot 1: Sheared late	
By 20 lambs, 1,775 lbs. at \$8.25 per cwt.....	\$146.44
By wool, 175 lbs. at 25c per lb.....	43.75
Total.....	\$190.19
Lot 4: sheared early	
By 20 lambs, 1,822 lbs. at \$8.25 per cwt.....	\$150.32
By wool, 126 lbs. at 25c per lb.....	31.50
Total.....	\$181.82
Difference in favor of Lot 1.....	\$8.37
Difference in favor of Lot 1, per lamb.....	.42

#### Fed alike:

Lot 2: sheared late	
By 20 lambs, 1,756 lbs. at \$8.25 per cwt.....	\$144.87
By wool, 168 lbs. at 25c per lb.....	42.00
Total.....	\$186.87
Lot 5: sheared early	
By 20 lambs, 1,784 lbs. at \$8.25 per cwt.....	\$147.18
By wool, 128 lbs. at 25c per lb.....	32.00
Total.....	\$179.18
Difference in favor of Lot 3.....	\$7.69
Difference in favor of Lot 3, per lamb.....	.38

#### Fed alike:

Lot 3: sheared late	
By 20 lambs, 1,692 lbs. at \$8.25 per cwt.....	\$139.59
By wool, 172 lbs. at 25c per lb.....	43.00
Total.....	\$182.59
Lot 6: sheared early	
By 19 lambs, 1,636 lbs. at \$8.25 per cwt.....	\$134.97
By wool, 117 lbs. at 25c per lb.....	29.25
Total.....	\$164.22
Difference in favor of Lot 3.....	\$18.37*
Difference in favor of Lot 3, per lamb.....	.49

\*The difference in favor of Lot 3 (\$18.37) should be disregarded because of there being only 19 lambs to sell in Lot 6. 49c per head represents the difference per lamb about as nearly as it can be calculated.

It was thought that shearing early in the feeding period might have a tendency to cause the lambs to sell bet-

ter on the market, but such did not prove to be the case. Lots 1, 2, and 3 were sheared only about a week be-



have a value because they show that early shearing does not always result in greater gains. They warn the feeder to study his conditions carefully, and unless he is prepared to keep his lambs comfortable under the most adverse weather conditions, he would do well to see large advantages in the procedure before he decides to shear early.

Should the lambs when purchased be badly infested with ticks and the weather too cold to permit of their being dipped without danger of serious injury, it is the best policy to shear, providing shelter is available. Should they have an unusual quantity of burrs or other vegetable materials in their wool, it is often advisable to shear them as early as possible in order to keep these materials from irritating and penetrating the skin, thus forming pus pockets in the flesh, which are almost sure to cause the carcasses to be condemned.

There are feeders who believe that, as a rule, as in the case of this experiment, late shearing will secure the most favorable results. Believing that large gains in weight will result after shearing, they plan to shear two or three weeks before marketing, but not until about the first of June, after which there is little likelihood of cold, backward weather. Furthermore, when wool is high in price, the extra weight of wool secured from late shearing is undoubtedly an immense advantage. When it is very low, it is doubtful whether retaining the wool crop at all is of advantage.—Bulletin 167, Illinois Station.

#### COMPARISON OF WETHER AND EWE LAMBS AS FEEDERS.

A secondary object in Experiment No. 1, as stated in the introduction of this bulletin, was a comparison of wether and ewe lambs with respect to consumption of feed, extent of gains, and market quality. For this purpose two lots of 20 ewe lambs each (designated as lots 5 and 6) were selected. Lot 5 was fed as nearly as possible like Lot 1 (wethers), already discussed under Experiment No. 1, and lot 6 like lot 2 (wethers), also discussed under

Experiment No. 1; but since the amount of feed consumed was determined largely by the appetites of the lambs, it was impossible to feed, in exactly the same way, all the lots to be compared.

Table 8.—Comparison of Wether and Ewe Lambs as to Feed Consumed and Gains Made.

	Proportion of corn to hay..	Shelled corn per head, lbs.	Alfalfa hay per head, lbs.	Gain per head, lbs.
Fed alike:				
Lot 1 (20 wethers).....	1 : 0.99	111.6	110.4	27.05
Lot 5 (20 ewes).....	1 : 1.00	110.4	110.4	27.14
Fed alike:				
Lot 2 (20 wethers) .....	1 : 1.36	94.3	127.7	24.22
Lot 6 (20 ewes).....	1 : 1.34	93.5	125.3	22.05

With respect to consumption of feed, it appears that the ewes ate slightly less in a given period than the wethers, but the difference is too small to be of significance.

In extent of gains, lot 1 (wethers) and lot 5 (ewes) were practically equal, though lot 1 would have exceeded lot 5 had it not been that in lot 1 there was one lamb that gained only 11 pounds, the lowest gain made by any lamb of the four lots involved in the comparison. A comparison of the gains made by lot 2 (wethers) and lot 6 (ewes) shows a difference of more than 2 pounds per head in favor of the wethers. This is enough difference to be of significance, for, since the consumption of feed was almost the same, it will be seen that the wethers made the cheaper gains. The fact that in one case the ewe lambs equaled the wethers in extent and economy of gains while in another case the wether lambs excelled the ewes, make inadvisable a positive statement on the comparative extent and economy of the gains, although it would seem that the advantage is slightly in favor of the wether lambs.

As to market quality and finish, it was generally agreed among the commission men and buyers who saw the lambs, that the ewes were slightly superior to the wethers. Because of their sex, they were slightly more refined in general quality. They were also more plump and rounded in outline. Had

they been sold in carload lots, it is thought they would have brought slightly more per hundredweight than the wethers because they looked as though they would return a higher per-

centage of carcass to live weight. This opinion was substantiated by the returns from slaughter, which were as follows:

	Percentage of carcass to live weight
Fed alike:	
Lot 1 (wethers).....	51.6
Lot 5 (ewes) .....	52.8
Fed alike:	
Lot 2 (wethers) .....	52.2
Lot 6 (ewes) .....	52.5

The higher dressing percentage of the ewes cannot be accounted for by a greater shrinkage resulting from shipment to market, as lot 1 (wethers) shrank 7.5 pounds per head while lot 5 (ewes) shrank only 5.7 pounds per head, and lots 2 and 6 each shrank 4.3 pounds per head.

All four lots sold at \$7.85 per hundredweight. On this basis the carcasses cost the purchaser the following per pound (not crediting the by-products):

Lot 1 (wethers) .....	15.21 cents
Lot 5 (ewes) .....	14.87 "
Lot 2 (wethers).....	15.04 "
Lot 6 (ewes) .....	14.95 "

In each case the ewes cost the purchaser less in the carcass than the wethers. The poor showing of lot 1 in percentage of carcass was undoubtedly greatly influenced by two lambs, the poor one already mentioned, which gained only 11 pounds and was very deficient in market finish, and another one that was noticeably deficient in market finish. It would seem that the difference between lots 2 and 6 is more nearly typical of the difference one

would expect to find between the dressing of wether and of ewe lambs.

It may be that ewe lambs have an advantage over wether lambs in being more uniform in their ability to make gains. In lot 1 (wethers), the three lowest-gaining lambs made 11, 14.5, and 19.5 pounds, respectively, while in lot 5 (ewes), the three lowest-gaining lambs made 15, 18, and 19 pounds. Comparing lots 2 and 6 in the same manner, we find that the three lambs with the lowest gains in lot 2 (wethers) made 12.5, 12.5, and 13 pounds, while the three with the lowest gains in lot 6 (ewes) made 13.5, 13.5, and 14 pounds. The differences submitted are small and may have been due to coincidence rather than to any inherent difference between wethers and ewes in ability to make gains.

In conclusion, it is perhaps fair to say that wether lambs consume slightly more feed and make better gains than ewe lambs in a feeding period of 90 days, and that ewe lambs take on a slightly better finish on account of their better quality and greater smoothness of form.

However, it would seem from the results of this experiment that the difference in the behavior of wether and ewe lambs in the feed lot and at the market is so slight that there is little cause for the feeder to prefer one over the other.—Bulletin 167, Illinois Station.

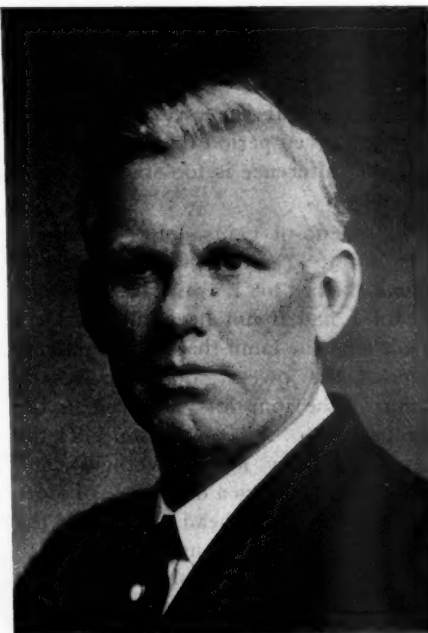
#### WILD ANIMALS INCREASING.

Vernon Metcalf, assistant to the chief of operation in the local district headquarters of the Forest Service, has just returned from a three weeks' inspection trip on the Kaibab National Forest in Northern Arizona. He reports that the stockmen in that section have been greatly troubled with wolves and coyotes, the former operating mostly in the semi-desert areas surrounding the forest. Notwithstanding the fact that the stockmen have continuously offered rewards aggregating about \$200 per wolf, but three have been killed in the past two years, two having been shot and one captured in a trap. These were timber wolves, and all three were of large size, from the hind foot to the snout measuring over six feet. Of these three, one was shot within the boundaries of the forest.

The coyotes in that part of the country are also exceedingly large, and it is the opinion of T. B. Bledsaw, a specialist in coyote trapping, who has recently been employed by the Forest Service on the Kaibab, that these varmints are a cross between wolves and coyotes. Whether or not this is true, they are of sufficient size and strength that two or three are able to take down a full grown cow. Mr. Bledsaw had been trapping but two weeks up to the time of Mr. Metcalf's visit, working without any extra assistance, and had trapped thirty-three coyotes and two lynx cats from one station.

#### Owens Killed a Lion a Week.

Three or four years back, mountain lions were the greater enemy of the stockmen in that region. The former Forest Service hun-



A. J. KNOLLIN  
Elected Eastern Vice President.

ter on the Kaibab, Jim Owens, succeeded, with his hounds, in practically ridding the country of these animals, killing nearly three hundred in about five years. With Mr. Bledsaw's services the forest officials are also hopeful of a decided decrease in coyotes. So far as the wolves are concerned, except for the assistance of government men, the cattlemen are up against the proposition of protecting themselves, since state and county bounties are not sufficiently alluring to secure results.

#### "Drift Fences" Aid Grazing Control.

Both winter and summer range for stock is to be found within the boundaries of the Kaibab National Forest, necessitating no crossing and recrossing of the boundary, and owing to the ease with which range

stock could drift onto the forest, the great grazing problem has been to find some method of restricting the number of stock to the carrying capacity of the range. After considerable study and investigation, it was found possible, with the aid of unbroken cliffs, to close one entire side of the forest with about eight miles of drift fence. This stopped the drift of unpermitted stock.

The next step was to control proper distribution of stock on the range, and to count and remove all unpermitted stock. With the development of watering places at strategic points, thus utilizing hitherto unused range, and the division of summer and winter ranges by a drift fence some twenty miles long, the problem has been at least partially solved, the number of stock reduced to what the range will carry, and means found to control the indiscriminate drift of stock to parts of the range not yet in condition for grazing. This plan involves the holding of the stock on the winter range until the summer range has a good start, and insures good winter range, since the early redrift from the summer range can be controlled. The east side of the forest is now being fenced, and a great improvement in range is confidently expected.

Prior to the construction of these fences, the range was very badly overgrazed, and great numbers of cattle were lost yearly through consuming poisonous plants. Conditions finally reached a point where, as against old times when two-year-old steers could readily be sold for three's, two-year-olds were in such poor shape that cattle buyers hesitated to accept them even as two's. However, the range is now rapidly recovering; with plenty of grass very little loss from poison is being experienced; and at the last steer delivery the change in the condition of the stock was decidedly noticeable, there being little trouble in classing many two-year-old steers with the three-year-olds.

#### THE BEST BEFORE AMERICAN GROWERS.

It is not simply a question of fineness in the fibre. We do not doubt for a moment that there is plenty of wool grown in America today which is quite fine enough for most of the present manufacturing needs. But we are equally certain that the rank and file of American growers still have the best before them in the matter of preparing their clips for market. We cannot emphasize too strongly that the trade needs honest wool, and when growers make up their minds to convince users that they can turn out clean, well graded clips, they will have done the best thing possibly to justify the high level of values which decent wools are likely to maintain.

**"THE DIFFERENCE", AS EXPLAINED BY "A SHIPPER" SEE COPY OF LETTER BELOW**

# The Knollin Sheep Commission Co.

Chicago South Omaha So. St. Joseph Kansas City Denver

Salt Lake City, Utah, Oct. 21st, 1913.

The Knollin Sheep Commission Co.,  
South Omaha, Neb.

Dear Sirs:

I just returned today and on arrival found your account of sales of six cars of lambs sold by you, which is very satisfactory. I see by checking up, your returns show \$394.00 more than the six cars of the same lambs that I had on the market the same day, these being the same lambs as the ones you handled.

I want to thank you for your interest in making such a creditable showing over the others. Thanking you, I beg to remain

Yours truly,

A. S. ERICKSON.

## ADVERTISING RATES

IN THE

# NATIONAL WOOL GROWER.

PUBLISHED MONTHLY AT SALT LAKE CITY, UTAH

Advertising copy must be in this office not later than the 6th of the month. No discount from these rates under any circumstances

SPACE	1 issue	3 issues	6 issues	12 issues
1 inch.....	\$ 2.00	\$ 5.00	\$ 9.00	\$ 18.00
2 inches.....	4.00	10.00	18.00	34.00
¾ page.....	14.00	40.00	75.00	130.00
1-3 page.....	18.00	50.00	92.00	170.00
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## HANDLING WOOL IN WAR TIME.

By S. B. Hollings, Bradford, England.

All commercial enterprise is either restricted or made more or less unprofitable by war. Disorganization even in one small part of the world means similar inconveniences in many others, and when we have such a war as is now being waged on the Continent, with all the leading nations of Europe involved, and the probability of other smaller ones being compelled to come into it, we cannot expect it to be otherwise than that wool interests generally will be seriously involved. Throughout Europe and the Australasian colonies wool is now in a most unique position, one which has not been known to exist in the same intense degree before. The great extent of the trade itself, and the vast amount of money involved are of course the chief reasons for this, and though the elemental factors are much the same as they were in 1872, the two former influences count for very much more than they did at that time.

We might begin with the wool trade or Great Britain. The level of values for wool and wool products is remarkably exceptional, and to say that is only putting the case mildly. Our government has been compelled to step in in a way which has never been done before, by forbidding all wool and wool products to be sent out of the country, except such as are of a Merino character. Numerous proclamations have from time to time been issued, all of which have aroused more or less comment and criticism, but the best we can do is to grin and bear it. Also the war office has commandeered all our hosiery manufactures, so that the trade in Leicester is almost at its wits' end to devise means for getting through its orders, and is being compelled by sheer force of circumstances to give place to its own prejudices, and is now coming to Bradford for yarns spun on our principle, not being able to get any of its favorite sort from France and Belgium. The woolen cloth trade is also having to put its best foot forward, khaki goods being urgently wanted for our troops. The total effect of all this has been a great advance in the price of and demand for cross-bred wool and its products, as well as an unprecedented call for hosiery wools. The Australasian wool stream has so to speak been pent up, but even here the channel is not closed, and there is very little prospect of wool supplies from that part of the world being more than adequate for the demand, particularly in view of the fact that in consequence of drought the production will probably be greatly reduced.

The lesson of the war for all wool men seems to be that wool will be wanted more in the future than at present, and that even greater discernment than ever will have to

be exercised in its purchase and manipulation. The great difficulty which users have to contend against today is to find wool which will suit their purpose. All the cry is for good, straight material either greasy or scoured which can be used for the Government orders which are now so abundant, and in London as well as Yorkshire among dealers in English grown wools, material of distinctive characteristics has been best to sell. Naturally the advance in prices has made users more particular about what they buy, and though quality is not just now being sought after for its own sake in the sense that fine wools are wanted most—which is not now the case—there is certainly great need and scope for really honest wools which have been thoroughly classed and skirted.

There is not a single grower in any part of the world who can afford to imagine that

## NOTICE!

The National Wool Growers' Association has made arrangements whereby members of the National Wool Growers' Association can borrow money, in reasonable amounts, on long or short time loans secured by satisfactory real estate mortgages, at 8 per cent. The National Wool Growers will add a commission of 1 per cent for its services on the loan for the first year. This will make the interest charges 9 per cent for the first year, and thereafter the rate will be 8 per cent. Write direct to the Association for particulars. No chattel mortgages can be taken.

anything which is rolled up inside a fleece is good enough to put on to the wool market. The writer has been convinced for some time, and the trend of events in the producing and manufacturing world goes to show that he is right, that the wool of the future is the wool which has been properly taken off the sheep's back and has received such preliminary treatment as puts it well into the way for commencing the manufacturing processes. We have now got beyond the primitive stages of wool manipulation. The simple hand comb has given place to the intricacies of the machine comb, and naturally those who know that the raw material is going to go through a mechanical process which costs money and time, wish to secure a commodity which can be put through that process efficiently and profitably.

Just as prejudice is being broken down in manufacturing areas by the great war,

so prejudice will have to be overcome among many growers. They will have to learn that good bred sheep producing clean well conditioned wools are the best, and having realized this all-important fact they will set to work to improve their stocks by selection and by the introduction of new and better blood. After this the more widespread adoption of first-class methods of classing, skirting, and packing will follow. In saying this the writer has no condemnatory thoughts in his mind. He has no desire to speak disparagingly either of the American grower or his wool. Yet he knows that there is much room for improvement, and that the way to bring about such improvement is to act on the lines set forth. There will then be less dissatisfaction about prices, and the grower will feel that he occupies his rightful place among the world's producers of raw material.

## DISEASE ATTACKS MOUNTAIN SHEEP AND GOATS.

The department of agriculture has undertaken the investigation of a serious disease which is affecting the Rocky Mountain bighorn sheep and the mountain goats, and is reported as existing on the Lemhi National Forest in Idaho.

The forest officers think that it is the same disease that caused the mountain sheep to die in great numbers during 1882-3. The nature of the disease is not known, though it results fatally and sheep affected with it seem to have rough and mangy coats and are very much emaciated. Three bureaus of the department are engaged in the study—the Biological Survey, Bureau of Animal Industry, and the Forest Service. A competent veterinarian has already gone to Idaho to start the work.

## FOOT AND MOUTH DISEASE.

The closing of the Chicago stockyards caused some concern to western feeders. However, it should be understood that these yards were closed for the purpose of disinfecting them. That work has now been done by the Bureau of Animal Industry, and the yards have been reopened and seem to be handling their full share of stock.

In this outbreak of foot and mouth disease our stockmen may rest content that the Bureau of Animal Industry will eradicate the disease in the shortest possible time. It must be remembered that those at the head of this bureau have twice before cleaned up this disease in this country in very short order. The veterinary service in no other country has ever been able to eradicate this disease once it had gained a foothold such as it has twice before gained in this country. This should reassure our stockmen that every reasonable measure will be taken to rid the country of this plague.

# The Future of the Public Domain

Address by SENATOR E. O. SELWAY, Dillon, Montana

HAVING been requested by the officers of the National Wool Growers' Association to make a talk on "The Future of the Public Range," I take pleasure in submitting the following for your consideration:

"This seems to me to be a great question. As the ranges are curtailed the question grows of more importance. From time to time we have different policies advanced by the Department of Interior. The different heads of that department have had in the past ideas which, to say the least, were very dissimilar. In years past it seemed to be a foregone conclusion that the owner of real estate adjacent to the public ranges would be granted consideration, which could not be asked by the man whose property holdings were entirely of a personal nature. As time goes on, the sentiment seems to be that the land remaining in the public domain should be gotten upon the tax rolls of the several states. From an economic point of view this looks to me to be very practical. The one question is, will that land remain in the hands of the original homesteader, or will it be bought up by the people owning large real estate and livestock holdings, to be used as grazing land rather than for agricultural purposes? My contention has always been that the best manner to conserve the public domain, to make possible the production of meat at cheaper prices, is for the government to furnish leases, rather than to encourage homestead settlements, except those portions which are clearly of an agricultural nature. In this manner it would be possible for the federal government to make demands as to what should be run on the range; that is, the proportion of the different kinds of livestock. In other words to get the most possible use of forage. In the livestock raising countries of South America, my understanding is that the range belongs to the government. They allot it to individuals with the specific con-

tract to the effect that for every head of cattle run on this range, there should be also a given number of sheep, a given number of horses, and so on down the line, making use each year of all of the feed. It is a well known fact that after a cow fails to thrive in pasture on account of the scarcity of feed, it is possible for a sheep to grow fat on the feed which is left, and the feed consumed by the sheep would go to waste, if the pasture is grazed exclusively by cattle. On a great deal of the public domain which is open at the present

opinion is that the salvation of the farmer is to go into the livestock business, and in the inter-mountain country remote from the market centers it is necessary to ship his produce as livestock rather than cereals. Under ordinary farming conditions in Montana, and the same law will apply in the majority of the range states, the only profit which a farmer hopes to get is by feeding rough crops to livestock, which could not be marketed at a profit in any other way.

"The interstate grain rate case in Montana brings out the testimony that the Montana farmer cannot raise wheat at a profit and this should be conclusive evidence to the prospective homesteader that he must depend upon livestock as a source of revenue if he expects to make a stick of his homestead. This evidence is conclusive and will apply to all states whose freight rates correspond with those of Montana. I advocate placing the people whom we already have in this western country on a paying basis before encouraging new immigration. This doesn't suit the "boomer," but it is right just the same.

"When this matter is taken into consideration, it is well to remember that we have thousands of these farmers who own 160 or 320 acre homesteads, who have taken them up because they are adjacent to the public domain; and they would never hope to maintain a prosperous home if they were compelled to stay within the confines of their own fences. With reference to the proposed legislation for enlarged homesteads, it is well for the government to bear in mind that the public domain will be absorbed, and the man who is already located and is getting a part of his prosperity from the public domain will be excluded by his neighbor who has the larger homestead. The question is, will the fellow with the large homestead be able to make a living when there is no public domain to use in connection with it? My contention is that he will not.



Senator E. O. Selway

time, cattle range during the spring and fall upon land used for the wintering of sheep. Sheep range in the fall and spring upon land used by the cattle during the summer months. While this is customary in a good many localities, it seems to me that it would be advisable for the federal government to take charge of the public domain sufficiently to demand that this custom prevail. Diversified livestock interests seem to me to be the salvation of the meat question.

"With reference to homesteading, my

"While down in Washington last March as a witness before the Public Lands Committee of Congress, with relation to the grazing bill and the enlarged homestead, I tried to impress upon those gentlemen the fact that the enlarged homesteads would absorb the public domain, while their contention, in some instances at least, was that the man who has 640 acres of patented land is just that much better off than the fellow who only has 160 acres; and it seemed impossible to impress some of the members of that committee with the idea that the whole thing would be 640 acre homesteads, whenever such law is passed; and that the man who has one of those homesteads would have absolutely no chance of using any range except perhaps a small amount of forest reserve a few months in the summer. A very few head of livestock will eat all of the feed on 640 acres in a comparatively short time, and it is impossible for a man to maintain a thrifty home with only the feed raised on 640 acres of arid land. The impression I received from the Interior Department is that they think the proper thing to do would be to grant 640 acre homesteads at the present time; and when the people have taken the more desirable land in these homesteads to increase the size to two sections, and so on indefinitely until everything is taken. My impression is that the majority of this range would be taken up by the men who value their homestead right rather than the land which they acquire through that franchise, and that the majority of these homesteads would become the property of the man who has real estate holdings in the way of improved farms, water rights, etc., in the valleys. This, of course, would increase the value of the man's real estate holdings; and the question is, would it increase the livestock capacity sufficiently for him to keep on doing business in a profitable manner. My contention is that he could not. However, if he were permitted by the government to lease this range at a fair rental with assurance that he could have it for a period of years, he would systematize his business in such a man-

ner that he could make it pay a decent profit. There is an overhead expense in connection with the livestock industry which must be governed by the amount of income taken from it, and on too many of the livestock outfits of the range states this investment is such that the business does not pay as much profit as could be derived from merely loaning the money. We, none of us go up against the hazard of the range business for fun, and when our investment through judicious management will not bring a fair remuneration, I think we are of the opinion that it would be better to buy government bonds or take real estate mortgages. I hope some of these days to see the government classify the public domain by setting aside that portion suitable for agriculture and leasing the balance to the actual settler, either in blanket or in specific leases, making it compulsory for a man to run diversified livestock; or lease granting him his permit for only certain periods of the year and permitting a man who owns other kind of livestock to make use of the range after he is through with it. It was the feeling of your representatives who appeared in Washington last spring that something of this kind might be accomplished, and I understand that at the present time there is a bill in the process of construction which tends toward these results.

"However, whether or not it will ever become a law remains to be seen, and my impression is that there are more men in Congress whom the homesteader appeals to very forcibly than there are of those who are interested in the meat problem. All questions and suggestions revert to the proposition as to whether or not certain lines of legislation would be popular in the way of getting votes for another term of office. The men who are already located in the range states would be pleased to see the public domain perpetuated, while those in the thickly settled agricultural states are anxious for liberal homestead laws, without knowing whether or not it would be possible to be successful on one of these homesteads. The majority of them are sup-

plied with information furnished by the railroad companies and real estate agencies, and they have very little idea of the exact facts until such time as they have cut loose their moorings at home and start west to get one of these homesteads. The more hardy ones perhaps succeed, but there are thousands in Montana, as well as other states; who have taken up homesteads, spent their last dollar in trying to get started, and they realize that nothing but failure awaits them. This perhaps is not a patriotic thing for a man to say, but it is a fact nevertheless, and when you see thousands of sheep and cattle being fed on No. 1 Turkey Red Wheat, as was done during the winter of 1913 and 1914, you could not help appreciating the fact that there should be some provision whereby those livestock could be produced cheaply up to the time when they are ready to enter the feed lots.

"In years to come perhaps the government, through its investigations and experiments, will be able to develop a crop that will blow my theory into the air, but so long as we have to depend upon bunch grass as a feed crop on this land, it is useless for any man to think he can be prosperous on one of these homesteads without access to the public domain. These problems will evidently be solved in the city of Washington, and the diplomatic thing for the livestock man in the range country is to stay as closely in touch with conditions down there as he can, and maintain a position where he can talk it over with them, rather than to occupy an attitude of disagreement. Legislation will be passed vitally affecting the public ranges, and we should be ready at all times to go down to Washington in the capacity of counselors with an organized idea as to what is the best thing for the country; and I believe that in the long run the public range question will be solved satisfactorily, providing we can ward off the big homesteader temporarily."

If you were unfortunate enough to miss the convention, the next best thing is to read this paper.



# Breaking In New Zealand Bush Country for Sheep

(By R. H. HARROWELL)

IT may interest your readers to hear something about the conversion of heavy bush country in New Zealand into first class sheep country. The term bush in New Zealand has altogether different meaning to what is understood in Australia. The native Australian bush that has had to give way to sheep industry presented fewer difficulties than are encountered when dealing with New Zealand forest lands. Australian bush is of an open nature through which more often than not vehicles could be driven even when the country was in its primitive state. All that man had to do, as far as timber was concerned, to prepare the land for sheep was to ring-bark the trees and as fast as they died rich natural pasture sprang up from the soil.

In New Zealand on the other hand conditions are vastly different, and the conversion of forest country into sheep runs is a much more formidable undertaking.

In the first place, the New Zealand bush in its primitive state, is a dense mass of gigantic trees the boughs of which are interlaced overhead. Beneath this canopy, which excludes the direct rays of the sun, a dense jungle growth is found. There is no grass or herbage upon the soil, in fact there is no feed of any kind on which sheep could live. Cattle and horses may sometime eke out a more or less miserable existence, but generally speaking the New Zealand bush in its primitive state is absolutely valueless for stock grazing purposes. It would in fact be impossible to ride through the undergrowth referred to.

It is therefore a very formidable task that confronts the pioneer settler who is about to convert New Zealand bush into pasture land. Almost without exception this bush country is very broken, being a continuous succession of high ridges and deep gullies. The trees which comprise the forest do not

respond to ring-barking, the pioneer has to attack every tree with the axe and fell it to the ground. This work of bush falling is carried out during the winter months which, as is usual in all heavy forest country, are noted for an extremely heavy rainfall.

The first work of clearing is to cut down the vines and undergrowth, the trees are then felled though in the majority of contracts for this work it is specified that only those trees under three feet in diameter shall be cut down. During the spring months the timber has time to die, and if the season is favorable it is generally dry enough to burn about December, January or February.

The settler, however, is absolutely at the mercy of the climate, and the summer months in this class of country do not as a rule mean entire freedom from heavy rain. It not infrequently happens that before the fallen bush becomes dry enough to burn heavy rains

## FOURTH ANNUAL

# Pacific International Live Stock Exposition

UNION STOCK YARDS

NORTH PORTLAND, OREGON

DECEMBER 7-12, 1914

## CLASSIFICATIONS:

### ALL BREEDING CLASSES

	1st	2nd	3rd	4th	5th
1—RAM, 2 years old or over, dropped before September 1, 1912 .....	\$3	\$5	\$3	\$2	\$1
2—RAM, 1 year old and under 2, dropped between September 1, 1912, and September 1, 1913 .....	\$	5	3	2	1
3—RAM LAMB, under 1 year, dropped since September 1, 1913 .....	8	5	3	2	1
4—EWE, 1 year and under 2, dropped between September 1, 1912, and September 1, 1913 .....	8	5	3	2	1
5—EWE LAMB, under 1 year, dropped since September 1, 1913 .....	8	5	3	2	1

### CHAMPIONS.

6—CHAMPION RAM, any age, competition limited to first prize winners in above classes .....	5
7—CHAMPION EWE, any age, competition limited to first prize winner in above classes .....	5

### FLOCKS AND PENS.

8—FLOCK to consist of 1 ram 1 year old and over, 2 ewes 1 year and under 2, and 2 ewes under 1 year .....	8	5	3	2	1
9—PEN OF 4 LAMBS, either sex, bred by exhibitor .....	3	5	3	2	1
10—PEN OF 4 LAMBS, either sex, the get of 1 sire .....	3	5	3	2	1

### PREMIER CHAMPIONSHIP FOR BREEDER.

11—Best showing in sections 1 to 5, inclusive, as determined to largest aggregate amount awarded to animals bred by any one breeder represented. ....	DIPLOMA
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The above classifications total \$2180.00 the largest offered in the West.  
Entries close in Fat Classes December 7, 1914.

### PREMIER CHAMPIONSHIP FOR EXHIBITOR.

12—Best showing in sections 1 to 5, inclusive, as determined to largest aggregate amount awarded to animals owned by one exhibitor .....	DIPLOMA
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### FAT SHEEP

#### INDIVIDUALS AND PENS.

#### MEDIUM WOOL OR DOWN TYPES.

	1st	2nd	3rd	4th
1—WETHER, 1 year and under 2 .....	\$10	\$8	\$5	\$3
2—WETHER LAMB .....	10	8	5	3
3—PEN OF 3 WETHERS, 1 year and under 2 .....	20	15	10	5
4—PEN OF 3 WETHER LAMBS .....	20	15	10	5
5—CHAMPION WETHER in above classes. ....	15			

#### LONG WOOL TYPES.

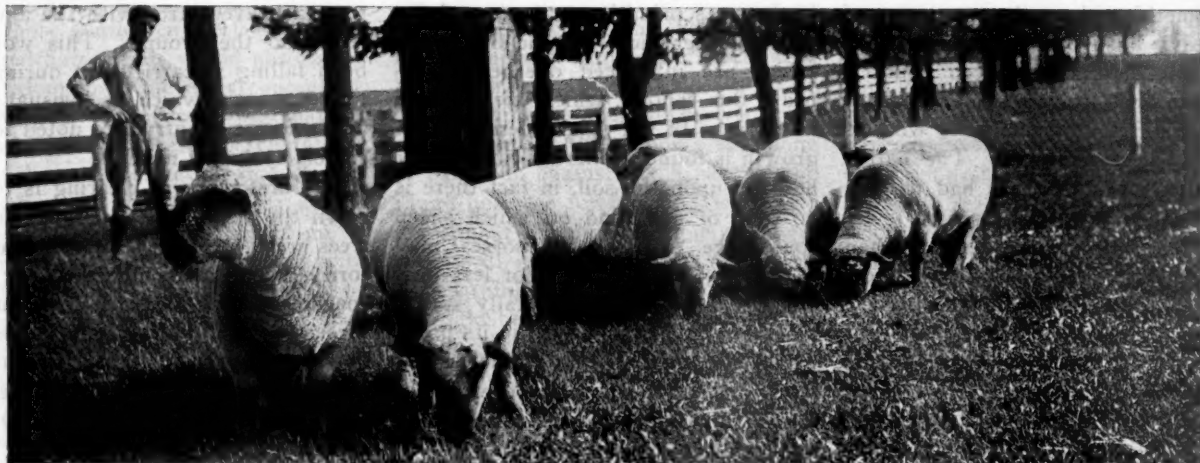
6—WETHER, 1 year and under 2 .....	10	8	5	3
7—WETHER LAMB .....	10	8	5	3
8—PEN OF 3 WETHERS, 1 year and under 2 .....	20	15	10	5
9—PEN OF 3 WETHER LAMBS .....	20	15	10	5
10—CHAMPION WETHER in above classes. ....	15			
11—GRAND CHAMPION, limited to wethers having won champion reserve in class. ....	25			
12—Wether under 2 years .....	25			
13—Reserve to Grand Champion .....	RIBBON			

#### CAR LOTS.

14—CAR LOT (not less than 50 head) ewes, wethers or mixed, 1 year and under 2 .....	75	50	25	15
15—CAR LOT (not less than 50 head) lambs. ....	75	50	25	15
16—CHAMPION CAR LOT of sheep of show. ....	50			

Entries close in Breeding Classes December 1, 1914.  
SEND FOR CLASSIFICATION.

## WALNUT HALL FARMS—HAMPSHIRE DOWN SHEEP



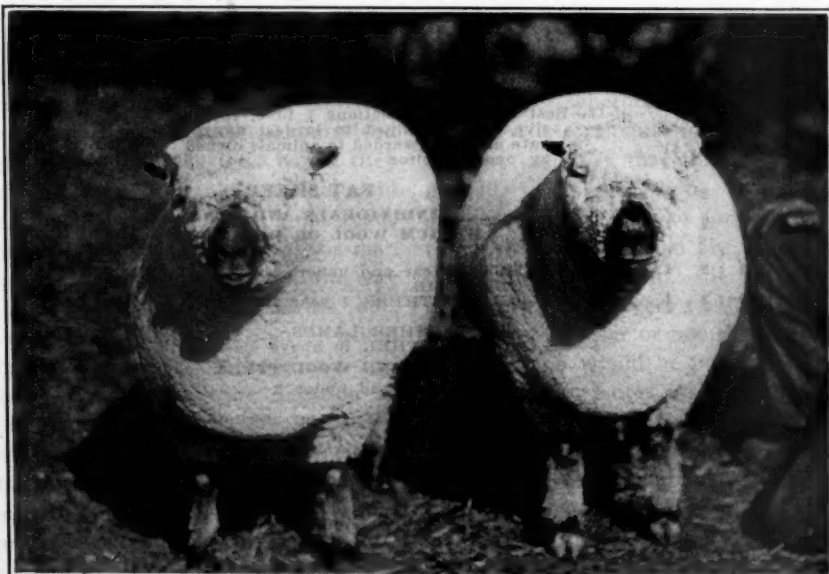
SOME OF THE WALNUT HALL STUD RAMS—These rams were machine sheared two months before photo was taken.

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set in causing rapid growth of green suckers which severely prejudice the chances of a good burn when conditions eventually become favorable enough to start the fire. A tremendous lot therefore hinges upon the weather conditions that prevail at burning-off time. Even when conditions are exceedingly favorable and the fire is started under the best auspices weeks of rain may set in and put out the fire just after it has consumed the small stuff so that it afterwards becomes extremely difficult to set the big logs and trunks alight.

A good deal of country in the North Island in New Zealand has been converted into its present profitable state from bush such as I have attempted to describe.

The province of Poverty Bay, of which Gisborne is the center, provides perhaps the best example of work of this kind. The rainfall in those parts varies from 50 to 100 inches per annum. The forests grow on soils of limestone and papa formations which are indications of excellent sheep country. Immediately after the burn, when the logs have ceased to smoke, and pack horses can be got about the clearings, the work of sowing commences. Generally speaking the seeds distributed comprise a mixture of English and Italian rye grass, cocksfoot, white clover, mustard, rape and turnip. If weather conditions have been favorable for burning the sowing takes place about January, and if suitable rains fall in three or four months' time the black charred clearing should be covered with a green carpet of forage. Of course the land is still encumbered with huge logs and stumps. Stock, generally cattle, are put on to eat down the first growth of rough feed and then sheep are put on. With anything like luck the settler will have by the end of September turned off at least three or four sheep per acre as fat. Later on towards September the whole clearing generally becomes a solid mass of prickly thistles, sometimes over five feet in height and impenetrable to stock. These thistles, however, serve a useful purpose. They shelter the

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Four ply costs more to make than one ply and will be sold at an advance of 1¼ cents per pound. Take your choice.

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250 lengths, 8½ ft. each, to a Bunch, 10 Bunches to a Package—4 Packages packed in a burlap bale for shipping. Burlap bale, therefore, contains 10,000 pieces, 8½ ft. long: weight about 220 pounds.

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finer grasses which were sown and enable them to become well established. By the end of March as a rule the thistles die off, and the slower growing grasses such as cocksfoot and clover make their appearance and become well established. The clearing may then be considered to be fairly well established as sheep country and with proper treatment will carry a thick sward of grass for a great number of years without renewing. In the meantime the logs and stumps gradually rot, and as the financial position of the settler improves he spends money in further logging up and burning off. It may, however, be nearly a quarter of a century before the last relics of the forest disappear.

I will give herewith a rough idea of the cost involved in clearing land such as I have described. The figures I quote prevailed a few years ago and one would not be far out in saying they have increased at least 25 per cent during late years.

**Expenses of Clearing, Etc., Per Acre.**  
Surveying into 100, 200

and 300 acre blocks.....	\$ .25 to \$ .37
Bush falling .....	6.00 to 9.00
Seed mixture .....	1.75 to 2.25
Fencing .....	2.50 to 6.00
Carting, packing, etc. ....	.50 to 1.25

These figures of course do not include interest or capital expended in

the purchase of land and in such improvements as house, wool sheds, stock yard, etc. The returns per acre from these lands depend, of course, to a large extent upon the individual who works them. In sheep farming as with every other occupation some men fail where others make a huge success. The returns from the land are also influenced by the type of sheep carried and local conditions. Generally speaking stock thrive in a most remarkable manner on these clearings, lambings of from 95 per cent to 105 per cent can almost be relied upon and an average clip of ten pounds per sheep including lambs can be expected. The Lincoln cross of sheep gives the highest wool yield while the Romney cross may average eight and one-half pounds throughout the flock, but advantages accrue from this cross on account of its extra hardiness.

Taking average prices it is not an unusual thing to clear over \$1,500.00 per thousand sheep on clearings laid down in the manner here described.

Funny isn't it that Australian sheep breeders advertise the fact that their sheep are closely inbred, while our breeders deny that they inbreed at all. We will some day learn the benefits of inbreeding.

## THE FIGHT AGAINST FOOT AND MOUTH DISEASE.

Washington, D. C.—The Secretary of Agriculture has issued the following statement regarding the quarantine for foot and mouth disease:

The present outbreak of the foot and mouth disease, which is one of the most contagious and destructive diseases of cattle, swine and sheep, exceeds in area affected any of the five previous outbreaks in this country. Unless the infection can be immediately localized and quickly eradicated, it threatens untold losses among live stock.

So contagious is the disease that in past outbreaks where but one animal in a herd was infected, the entire herd is almost all cases later contracted the sickness. While the mortality is not high the effects of the disease even on animals that recover are such as to make them practically useless. They lose flesh rapidly; in the case of cows, the milk dries up or is made dangerous for human consumption; in the case of breeding animals, the animal once infected becomes valueless for breeding, as it may continue to be a constant carrier of contagion.

It is possible to cure the external symptoms, but during the process of attempting to cure one sick animal the chances are that hundreds of others may be infected. The treatment or killing of a single animal in a herd was tried in an outbreak and did not prove effective, for the reason that the remainder of the herd soon became affected and had to be killed.

As a result of the five outbreaks in this country, and other disastrous epidemics of the disease in Europe and Great Britain, veterinary authorities of the United States are agreed that the only method of combating the disease is to stop all movement of stock and material which have been subjected to any danger of infection, and to kill off without delay all herds in which the disease has gained any foothold. This enables the authorities to eradicate affected herds and to isolate and hold under observation all suspected herds.

The owner of the slaughtered ani-

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mals is reimbursed on basis of the appraised value of the herd, the appraiser being appointed by the state. The expense of the whole process of condemnation and disinfection is divided equally between the federal and state governments.

Until the entire premises have been thoroughly disinfected and all danger of spreading the disease removed, the farm is quarantined by the local authorities in the same way in which it would be for a contagious human disease. This local quarantine prevents the visit of individuals or the transfer of any produce or animals from the farm to other farms. In some cases, because human beings can carry the disease to other herds, the state authorities have prevented children on infected farms from attending school. In other cases, as in Illinois and Ohio, the state authorities have closed the stockyards until they can be cleaned and disinfected.

The first effort of the department is to discover and segregate all animals sick with the disease or that have been exposed. To this end, the federal and state inspectors are now tracing up, through bills of lading and railroad records, all shipments of live cattle which have been made during the last sixty days out of any of the infected or suspected districts. The herds of animals so shipped are located and immediately examined by veterinarians. In this way the presence of foot and mouth disease has been discovered in various places in the present wide area now under federal quarantine, which includes Massachusetts, New York, Ohio, Pennsylvania, Indiana, Illinois, Maryland, Michigan, Wisconsin and Iowa. Similarly, the numbers of all cars in which animals have been transported from these districts have been obtained, and these are being located and thoroughly cleaned and disinfected.

Following the imposition of a general federal quarantine, and the killing of actually infected herds, comes a farm-to-farm inspection of the entire quarantined area. Later, when it becomes clear that the disease has been localized, it will be possible for the

federal and state authorities to free from quarantine all but the actually infected counties or districts, and allow the uninfected territories to resume interstate shipments of stock.

#### History of Present Outbreak.

The present outbreak first appeared in southern Michigan. How it was introduced there is not known. Shipments of diseased hogs from this place which passed to Chicago are believed to be responsible for the infection of the pens in the Union Stockyards. Once the yards became infected there was danger that every shipment of live stock through Chicago to other parts of the country might pick up the germs of the disease and spread the contagion. These shipments, composed largely of feeders and stockers, were sent to farms for fattening and did not remain in Chicago long enough for the disease to show itself in external symptoms. Some of the cattle, carrying the contagion, after shipment develop external lesions and this accounts for the outbreak of the disease in states as far apart as Iowa and Massachusetts. For this reason a large force of federal inspectors is now running down every shipment and examining the animals or herds at their place of delivery.

Next year it is planned to have a ram sale and sheep show in connection with our annual meeting.

The dues of all members will be due January first.

### RAMBOUILLET RAMS FOR SALE

50 head of thorough bred Rambouillet Rams for sale. One to three years old; large boned and heavy shearers.

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Invites the Sheepmen and their friends at special rates.

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More Sheep bought and sold in the Cullen Hotel than in any hotel in the United States.

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## Model Farm Rambouillets

Foundation flock of Kimball ewes and Seeley rams. Ours are heavy necked, large sized sheep, well covered with dense fleeces.

We offer 300 one, two and three-year olds, and 100 ram lambs.

Come and see them or write us.

**CRANER & GOODMAN CO., Corinne, Utah**

## PUREBRED LINCOLNS

I have for sale Purebred Lincoln Rams and Ewes. My flock this year averaged 16½ pounds of wool. Two of my stud rams sheared 34½ and 29½ pounds. Flock founded on stock imported from Dudding, the best in the world.

**COME AND SEE THESE SHEEP**

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Halfblood yearlings, twos and threes. Bred from thoroughbred Cotswold bucks (from Allen Bros.' Utah herd) and selected, heavy shearing Montana ewes. For further information address

**F. I. LONG, Great Falls, Mont.**

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**R. S. ROBSON & SON, Props.**  
Denfield, Ontario, Canada

**Breeders and Importers of Lincoln Sheep**

Correspondence Invited.

## Auction Ram Sales

Address by S. W. McCLURE, Salt Lake City, Utah

THE natural conditions that surround the sheep industry of the west make the ram a far more important part of the flock than is the case where sheep are handled on the farm. In all parts of the world the assertion is commonly made that the ram is one-half the flock. Such a statement is, of course, based on the belief that in prepotency the ram has as much power as the ewe. This may or may not be the case. Many of the pet theories of breeding that have been handed down from father to son for generations, have, in the light of recent investigation, been found to be incorrect. Probably this belief about the prepotency of the ram will meet a similar fate whenever someone thinks the question of sufficient importance to investigate it thoroughly. Be this as it may, so far as the range sheepman is concerned, the ram is more than half the flock. Not that we think his influence for good is any greater than the ewe's influence, but because it lies in the power of the range man to decide the quality of the rams he will use, and he cannot do this in the case of his ewes. As a rule, rams represent less than 3 per cent of the ewes, and it is much easier to regulate the quality of this 3 per cent than the other 97 per cent. Under range conditions, about so many ewes are required to make a band, be they good, bad or indifferent. No one would cull out three hundred tail-end ewes just to improve the quality of his flock, if by so doing he was to leave his band just that many short. The entire flock could be run at about the same total expense as it could with this three hundred out. Then, also, the range man finds it rather difficult to cull his ewes. The opportunities for so doing are not frequent, and the conditions under which it must be done deny the best results. Therefore, the conditions imposed by nature on the range sheepman, make it almost imperative that he depend entirely upon his rams for all improvement that can be made in the quality of his entire flock. Under these con-

ditions, anything that will enable our sheepmen to secure better rams, or enable our ram breeders to breed better rams, must inevitably cast its reflection on the quality of all the sheep handled upon our western ranges. I am suggesting that the sale of rams by public auction will have this result.

I know that the average sheepman who buys rams believes that the man who raises rams is making a large profit from the business. It is, however, my belief that as a rule the man who raises for sale strictly high-bred, first-class rams, is making less money than the man who raises fat lambs for the market. Incredulous as it may seem the better rams a man raises the less money he seems to make, and inversely, the poorer the rams, the more money is made by the man who raises them. All of you will concede that the difference in price between a poor ram and a good one is not very great, but the difference in the cost of production is decidedly greater. I do not mean to be understood as saying that none of our breeders of top rams have made money. A few of them who have been favorably situated have done so, but where one has made money, a dozen have lost. The path of the ram breeder in this country has not been smooth. The importance of encouraging the production of better rams is so great that I have been led to investigate this question with a view of determining what this organization might do to encourage the man who was raising good rams, and to enable the range man who wanted good rams to obtain them. The conclusions I have reached convince me that our very system of selling rams in this country is so wrong that under it the quality of our rams will deteriorate rather than improve.

In this country all rams are bought and sold at private treaty. There is no opportunity to compare the rams raised by the different breeders. Every obstacle is placed in the way of the man who is raising choice rams, and the man who desires to buy such rams.



## Pure Bred RAMBOUILLET SHEEP

400 yearling Ewes (not registered). Delivery May 1st, '15  
400 yearling Rams for 1915 trade.

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I have had a lifetime experience in breeding and selling livestock. Have conducted more sheep sales in western states than any other auctioneer. If you are considering any kind of a public sale I shall be glad to hear from you.

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We live in the heart of the Romney country and can supply breeding stock of this favorite breed to the best advantage.

In this country we have some flocks of as good Hampshire, Shropshire, Cotswold and Rambouillet sheep as the world affords. But where are they? Here and there over an enormous territory. When the rangeman wants rams he picks up his copy of the National Wool Grower and looks through the advertising to see where he can get the breed he wants, nearest to him. Or, if he cannot use those, he starts out on a still hunt to find what he wants. Ordinarily, he will travel 1,500 miles looking at one bunch here, another there; then at last, when he has seen them all, he wishes he had taken a bunch in another state, but it is often too far to go back for them. Consequently he buys what he does not want. He has spent probably two or three dollars per head in expenses and two weeks' time, and finally returned unsatisfied. This, of course, only applies to the man who is searching for top rams. The man who doesn't care, takes the first lot he sees. Good rams sell lower here than anywhere else, but I think this is because the men who desire to buy such rams don't know where to find them. I personally know of men buying rams at \$14.00 when they would willingly have paid \$25.00 for better ones.

Under the present system the lot of the man who breeds choice rams is far from happy. He has no way of knowing early in the season whether or not he will have a chance to sell. He may

be located in some out-of-the-way place, and still be breeding choice stuff, yet the buyers do not care to take the trouble to visit him. Finally, some speculator comes along and he sells the lot below the cost of production, and ceases to raise good rams. There is little enough money in the ram business at best so that we should make every effort to see that what there is in it goes to the man who raises the ram, rather than some second party. This year speculators came up from Texas and bought in these northwestern states about 1,800 Rambouillet rams at around \$10.00 per head. These rams were afterwards sold to southern breeders at \$18.00 to \$25.00 per head. Now, I have not a word to say against the speculator, but when he bought rams at \$10.00 per head, the man who sold them was losing money and could not afford to buy top sires to head his stud. Suppose the actual breeders of these rams had secured the \$18.00 to \$25.00 that the final buyer actually paid. Why, it would have resulted in every one of these ram breeders going out and scouring the country for the choicest stud rams that he could find. This would have resulted in the immediate improvement of one-half of the Rambouillet rams in the west, and, necessarily, a like improvement in the quality of many of our range ewes. Please remember that unless the ram breeder is making money he is going

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The World's greatest flock of Cotswold consisting of 3000 registered breeding ewes of best breeding and highest merit. The best blood imported from England for past twenty years has been added to this flock.

They winter 4000 and summer 10,000 feet above sea level. They are raised on the range under the most favorable conditions known conducive to perfect health. No stomach or lung worms so prevalent in eastern bred sheep. For flock leaders we can furnish rams that cannot be excelled and we think superior to best ram brought to this country from England. We are offering 1000 Yearling Rams, 1500 Ram Lambs, a few cars of Breeding Ewes and Ewe Lambs.

Many of the best Hampshires produced in America and England including the leading prize winners have been added to our flock.

Come and see us and these sheep—you are always welcome.



The Kind I Breed

## CALIFORNIA RAMBOUILLETS

I offer for sale 2400 one and two year old pure bred Rambouillet rams. These rams are large and smooth with heavy fleeces of long staple white wool. I also have some of the same class of ewes for sale. My prices are reasonable and correspondence solicited.

**CHAS. A. KIMBLE**

BREEDER AND IMPORTER

**HANFORD, CALIFORNIA**



One of My Stud Ewes

to breed downward instead of upward, and that the quality of all our sheep rests in the palm of his hand.

The United States is the only country where rams are not sold by public auction. In Australia and New Zealand great ram sales are held at all the sheep centers. In Sydney, Australia, last July, 9,859 rams were sold at one sale. Sales were likewise held at many other points. The same is true of New Zealand. In Great Britain nearly all sheep are sold at public auction. Our buyers who have gone to that country have told me that in many cases it was impossible to buy sheep except by auction; that the breeders did not desire to sell at private sale. In other countries these ram sales have become the most important event in the commercial life of the sheepman. They are a veritable index of the state of the whole sheep industry. Compared with them sheep shows pale into insignificance. The opportunity to examine 500 rams raised by one breeder gives a hundred times better index of his flock than all his winnings at sheep shows combined. The sheep that win in our shows too often represent the standard of a few choice individuals and not the standard of the flock at home. Then everyone understands that as our Merinos are now shown, it is impossible to judge them intelligently. The ram sale, however, offers the buyer an opportunity to examine the sheep in its own clothing and to compare it with that worn by its neighbor. Imagine, if you will, the educational value of 6,000 rams from different flocks gathered at one point where the rangeman may compare them carefully and make his selection. Under such conditions he could afford to pay more for rams and would have the opportunity to get the best that was bred. Also the man who was raising the top would receive his reward and could go on and on increasing the standard of his flock.

Auction ram sales mean letting the light into some dark places in sheep affairs. We are asking for an open market for wool, but it is nearly as important that we have an open market

for rams. Of course, if ram sales are to be held, they must be under the direction of the National Wool Growers' Association. Commercialism must be eliminated and a square deal assured to all, both buyer and seller. Let the National Wool Growers' Association secure consignments of rams, furnish pens and feed for them and hold a two days' sale where they can be sold under the hammer to the highest bidder. Charge the seller a commission sufficient to meet expenses. While at first such a sale would be limited to one section, its influence would spread so that in only a few years this association would be supervising ram sales in all parts of the country.

I trust that you gentlemen will authorize your officers to take this matter in hand and establish such a sale next fall.

### PASTORALISTS REVIEW.

As we announce on another page, we have been given the subscription agency for the Pastoralists Review, published at Sydney, Australia. That paper is recognized as the greatest wool and sheep paper published in the world. The world's wool market is now made by the supply and condition of wool in Australia. The Pastoralists Review devotes much attention to the wool market, also the meat situation. The regular subscription price to the Pastoralists Review is \$6 per annum, and we shall be glad to forward the paper to anyone who desires it. It is worth the money.

### SOLD RAMBOUILLETS.

We are advised by the Quealy-Peterson Sheep Company that during the Utah State Fair they sold the following registered Rambouillets at the prices stated:

One two-year ram to John Seeley, Mount Pleasant, Utah, at \$600.00.

One yearling ram to Mr. Taylor at \$300.00; one at \$150.00; one at \$100.00; one lamb at \$50.00.

One yearling ram to McGill & Adams, Ely, Nevada, at \$125.00.

## PREVENTION OF LARKSPUR POISONING.

That larkspur poisoning can be eliminated by grazing small areas by sheep during the latter part of May and June, and in doing so use a very small quantity of cattle feed, and that in addition larkspur can be entirely eliminated after several years of close grazing by sheep, are shown by the results of the experiments conducted during the past grazing season on the Ruby National Forest in north central Nevada, with headquarters at Deeth. As practical stockmen know, larkspur, while deadly poisonous to cattle, does not poison sheep.

Continued losses of cattle on the Secret Creek drainage area led Supervisor Ryan to request a series of experiments calculated to lessen or eliminate such losses, and through preliminary investigation by Mr. A. E. Aldous, it was ascertained that the tall larkspur occurred in large quantities along the bottoms of the canyons and in a few small isolated patches on the hill sides, at the base of large snow drifts on this area.

A small canyon running into Secret Creek, known as Death Canyon, was selected for conducting the experiment on account of more losses having occurred here than any other place on the range. Approximately one hundred carcasses and skeletons were counted in this canyon, showing that at least ten head of cattle were poisoned each year. The larkspur occupies only six small patches, having a combined area of approximately twenty-five acres occurring mainly at the bottom of Death Canyon, in long, narrow strips along the creek. In grazing these, it was the intention to confine the sheep to as small an area as possible, so that all of the poison areas would be grazed and to keep the sheep as much as possible directly on these poison patches, also to bed them there each night.

A band of 426 head of sheep and their increase were put on the area May 24, but, through misunderstanding, were taken off June 13, being put back again June 18. They were kept on the

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Breeders and Sellers of the very best grade of thorough-bred Cotswold Rams, as well as owners of large tracts of spring, summer and winter ranges in Wyoming, well stocked with high grade range sheep.

## BREEDING EWES FOR SALE

We have 4000 ewes for sale for Oct. 1st delivery—2300 two-year-olds; 500 yearlings; 800 three-year-olds and 400 four-year-olds. Price \$5.00 per head F. O. B. Choteau, Mont. Will not sell any class separate.

This is an excellent bunch of one-half blood Cotswold and Merino ewes.

**MALONE & TRUCHOT, Choteau or Agawam, Mont.**



**Rams  
for  
Sale**

A band of 1000 purebred Lincoln and Cotswold Ewes. Bred from the best stock to be found in United States and Canada. Owned by Austin Bros., Salt Lake City, Utah



## Rambouillets—Rambouillets

### The Antelope Live Stock Co.

In order to clean up several hundred head of Rambouillet Rams which we have left, we are offering them at very reduced prices. If you want some good pure blooded range raised, hardy Rambouillet rams, yearlings or twos at a bargain write us. These rams can be seen at Rawlins, Wyoming.

**Address J. St. A. BOYER, Secretary**  
**ROCK SPRINGS, WYOMING**

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area this time until July 9, when they were permanently removed.

A close examination was made of this area July 21, which showed that practically all of the larkspur had been taken by the sheep, only the bases of the stock being left. It appeared to be about the most palatable weed for sheep on the area, as there was less left of it than any other species of forage. It showed practically no signs of starting new growth, although most of the other weeds and grasses were sending up green shoots.

The effect of sheep grazing did not appear to have much effect on the number of stock grazing in the near vicinity of the poison area.

Although cattle were not excluded from surrounding ranges, the holding of the sheep on the poisoned areas kept the former off while there was any danger, and the sheep so completely utilized the larkspur and prevented its further growth that no losses occurred.

Although cattlemen usually object to the intrusion of sheep on choice cattle range, it was found in this experiment that, by careful herding, the sheep did not utilize more feed than would have been needed for the average number of cattle that had been killed in past seasons by the larkspur. It appears from these experiments that losses of cattle can be stopped and improvement of cattle range be simultaneously effected, inexpensively, with sheep carefully herded during May and June.

### BARELY FOR SHEEP.

C. A. Smurthwaite Grain Company of Salt Lake City, Utah, have asked us to call the attention of sheep feeders to the fact that barley is cheaper than usual this year and should be more extensively used as a sheep feed. We understand that this firm has barley for sale at many points in Idaho and Utah and will make unusually good prices to sheep feeders.

When writing to advertisers mention this paper.

## Boston Wool Market

(By Our Boston Correspondent.)

October has followed the lead of the other months in showing sharp fluctuations of sentiment and values in the local wool market. Perhaps the most interesting development of the month was the placing of an embargo on the shipment of all wools from the United Kingdom by the British government. The announcement was made at the opening of the London sale, October 6, and the immediate effect was to eliminate all buying for American account. This was followed by a slight modification, allowing shipments of fine Merinos to be made in a limited way, provided suitable guarantees were given that the wool was not intended for Germany or Austria. As such guarantees are exceedingly difficult to give, little relief was afforded by the modification, and dealers are finding much difficulty in getting their wools out of London, even though bought in the Colonies and paid for there.

Later in the month, a similar embargo was announced on all shipments of wool from Australia, except those intended for the United Kingdom. Again were American buyers blocked, as no one cares to tie up a lot of money in wool that may be held up indefinitely by official red tape in England. A common expression in the trade today is that "an embargo is as good as a tariff." How long present conditions will continue, remains to be seen, but that the trade fears that it may be months before any definite relief is in sight, is shown by the renewed attention paid to the possibilities of the South American market. An unusual number of buyers have already gone to Buenos Ayres and Montevideo, including some whose houses have not usually been represented below the Line.

The strength of the situation lies in the necessities of the British and French armies, and the former government seems to be making a desperate effort to secure the needed supply of low wools for the making of blankets, underwear and sweaters. Good-sized orders for such goods have been placed

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Cheapest Sheep Feed Known to Man  
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Our Standard Choice Oklahoma Cake contains 41 per cent protein. We guarantee our Superior Quality to contain from 43 to 48 per cent protein. Its feeding value is about four and one-half times greater than corn. The nut size cake is the ideal sheep feed for the range. I am now taking orders for October, November and December shipment.

O. H. BROWN, Soda Springs, Idaho

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in this country, but great dependence is being placed on the home mills. In order that they may have the needed wool and not be compelled to pay exorbitant prices therefor, the embargo has been placed on shipments. The trade here seems to think that the restrictions will be lifted as soon as the English mills have secured the needed supply of wool.

Another important development of the month has been the reopening of the sales in London and the Colonies, which had previously been abandoned. London held the first sale of the season, October 6, the sale lasting only five days, and the offerings being limit-

ed to 47,000 bales. Of these 25,000 were New Zealand crossbreds. The opening was exceeding strong on crossbreds, the advance over the previous series running as high as 20 to 30 per cent. Fine Merinos opening slightly under the level of the last series, though the decline was not nearly as much as was expected. The market showed great strength, in spite of the elimination of American buying by the embargo, which was announced on the opening day. Bradford bought heavily taking practically all the crossbred wools in sight. Merinos were also in fair demand.

Conditions were so nearly satisfac-

tory, and the market showed so much more strength than was expected, that it was decided to hold further sales, the dates fixed being November 3 and December 8, 1914, and January 19, 1915. At the close of the series, Merinos were 5 per cent above the opening, with crossbreds firm at top prices. Since the sale, Bradford reports considerable strength, with crossbreds selling freely, but with Merinos quiet.

Another result following the successful resumption of the London auctions was a change of policy in regard to holding the Colonial sales which had been previously abandoned. Sales were held at Adelaide, October 14; Sydney, October 20; Melbourne, October 26; Geelong, October 28, and will be held at Brisbane, November 4. The previously abandoned sales in New Zealand will also be held, opening at Christchurch, November 12. At the Adelaide sale, opening prices were about 10 per cent below last year. Good 64s sold at a figure that means a scoured cost laid down here of 52 to 54 cents, against 54 cents last year. The decline in price was balanced by the war risks, insurance and exchange costs, so that here as at other Colonial sales, net cost is estimated at about the same figure as a year ago.

At Sydney, the offerings were only 12,000 bales. The selection was poor, practically nothing suitable for this country being offered. Cables varied as to probable costs, but apparently good 64s sold at 57 to 58 cents clean cost laid down here. Another cable gives the clean cost as 57 cents for long-stapled 64s and 54 cents for warp and web 64s. At both Adelaide and Sydney, English buyers were active competitors for everything in sight. The embargo was first announced at Melbourne, but in spite of this fine Merinos opened par to 5 per cent above last year, while crossbreds were 10 to 15 per cent higher. Choice 64s sold on a basis that means a scoured cost laid down here of 57 cents, where last year the opening was 52 cents. Here again, Bradford was an eager buyer for all good wools.

The trade is somewhat at sea as to

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what can be done in Australia this year. Neither dealers nor manufacturers care to invest large sums of money in wool that may be seized in England, or at the best be months on the way to this country. While the wool will be paid for if commandeered by the British government, there may be an embarrassing delay in getting the money. It will be small comfort to owners to know that the wool is safe in London or Liverpool, if the mills are needing the wool and the interest charge is running up.

Offers of new wool from South America are slow to come forward, but some scattering offers are coming to hand, at figures which will make the clean cost about the same as last year's opening. Practically nothing has yet been done in the new wools, though American buyers will be active in that market this year. At the same time this does not give the supply of fine wools which this market needs, as practically all the wool offered at Buenos Ayres is crossbred, and the same is true of a good proportion of that offered at Montevideo.

In this market, foreign conditions have overshadowed the trading in domestic wools. There is a much firmer feeling, especially in all medium grades, and sales have been actually made at advances over the figures quotable earlier in the month. For the first time for years, there have been heavy sales of foreign crossbreds and medium pulled domestic wools in this market to go abroad. Reasons for this are found in the needs of English contractors to meet the army demands of the British government. Such wools are advancing rapidly in England, while in this country they were something of a drug all through the summer.

Several thousand bales of New Zealand crossbreds have been sold for re-shipment to England, while New York and Chicago pullers are reported to have sold several thousand bags of B supers for the same purpose. New York B supers sold at 48 cents clean, while the Chicago Bs brought 43 to 45 cents. Remaining stocks are now be-

ing held at slightly higher figures. The New Zealand wools sold at 25 to 29 cents. Shipments to England of wool from this port were over 2,000,000 pounds for the month of October, against only 134,800 pounds for the month of September, and 2,180,936 pounds for the period from January 1 to October 1, 1914.

As domestic manufacturers had not previously been eager buyers of these wools, the effect was not so great as though finer wools had been wanted. Still, the possibility of the wools going out of the country stimulated buying to some extent, and American mills took on wools, which had been under option for some time. One buyer is re-

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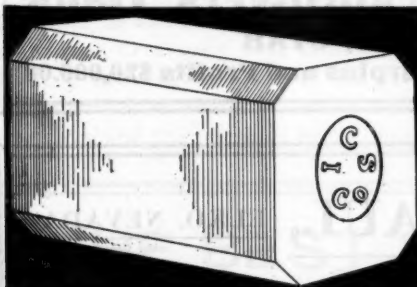
### Cooper's Fluid Dip

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ported to have taken on fully 1,800 bales for mill customers. It is probable, however, that the great bulk of the buying was for foreign account. Some curious developments are reported in connection with this trade. In some cases holders of wool refused to sell, where they were certain the wool was intended for German consumption.

According to the leading wool men, domestic manufacturers are showing a surprising amount of indifference to the fact that so large a bulk of wool is being taken out of the country. Leading handlers of such wools are better sold up than for years, and in some cases the largest houses have not a bale of New Zealand wool left in the lofts. There appears to be a strong belief in the minds of manufacturers that when the great weight of the wools from Australia is really available, there will be a sharp break in prices. This view is also shared by some of the importers. Consequently, there is no disposition apparent on the part of holders to store their wools. Now, as has been the case all through the season, the leading houses are free sellers of wool at current prices.

The year has been full of surprises for the wool trade, and there is a general fear that the remainder of the twelve months may hold in store some further disagreeable happenings. Yet

stocks of wool are small, and are being worked off stealthily. Some houses are well cleaned up, having very little Territory wool left. Territory cleaned values are not materially changed, even though undoubtedly there is a stronger feeling in the market. Scoured values are 60 to 62 cents for fine staple Territory, 57 to 58 cents for half-blood staple, 52 to 53 cents for three-eighths-blood staple, 48 to 50 cents for quarter-blood staple, 57 to 58 cents for fine clothing wool and 54 to 56 cents for fine medium. There was a little more quiet tone prevailing at the end of the month, as many of the mills were not getting the volume of duplicate business expected. Consequently they were buying less wool, as there was no wish to speculate.

Fine fleeces are still quiet and rather easy, but medium grades are firm and higher. Prices for the latter are now at the top level of the season. Some houses have sold their fine wools and are now stocked with medium wools for which they expect a sharp demand. Three-eighths-blood combing wools have sold as high as 29 cents, and some dealers are talking 30 cents for them. Quotations on Ohio fleeces are about as follows: Fine washed delaine, 31 to 32; XX and above, 30 to 31 cents; fine unwashed delaine, 26 to 27 cents; fine unwashed clothing, 25 cents; half-blood and three-eighths-blood combing, 29 cents; quarter-blood combing, 28 cents; half-blood and three-eighths-blood clothing, 25 to 26 cents. Michigan fleeces are selling on a basis about a cent a pound under Ohio.

The new Texas fall wools are being stored in local warehouses, though a few are said to have come forward on consignment. No price basis has yet been established. The wools are very defective this year, and buyers are shy. California fall wools have also been shorn, buying operations thus far have been mainly by local buyers. Old Texas wools are well sold up, though some small lots are being offered at 60 to 62 cents clean for twelve-months' and 56 to 57 cents clean for eight-months.

Receipts of wool for the month have

been 10,307,560 pounds, including 6,236,606 pounds domestic and 5,070,900 pounds foreign. This compares with 11,108,615 pounds for the same month last year, of which 7,965,441 pounds were domestic and 3,143,174 pounds foreign wool.

For the ten months ended October 1, the receipts of wool were 175,540,497 pounds domestic and 141,911,372 pounds foreign, a total of 317,451,869 pounds. This compares with 146,438,426 pounds domestic and 53,189,461 pounds foreign, a total of 199,627,887 pounds, for the same period in 1913.

#### ACTIVITY IN LEEDS WOOL INDUSTRIES.

(Mr. J. F. Smith, Leeds, England.)

The demands for clothing for the armies and for the numerous recruits have assumed a magnitude in excess of the immediate supplies. Inquiries came with a rush from the British and French governments for khaki and blue gray cloth of the usual standards, but such goods were not to be found in stock, since they have no other markets. The British authorities were informed by the Leeds Chamber of Commerce that it would be necessary to relax their restrictions in order to obtain the quantities required, and the advice was accepted.

It was decided that the first outfits of the recruits should be in blue serge, and the lord mayor of Bradford was instructed to obtain 15,000 pieces for quick delivery. There was, probably, more stock of that type of cloth in suitable weight than any other. As regards the dyes, there was little time for question; and indigo, alizarine, and aniline may all have served the purpose in such emergency. That, however, was not a serious matter, since blue uniforms are only intended to be the temporary outfit of the recruits, while those who are sent to the front must be clothed in khaki.

Although a term common in the east, khaki signifies dirt. It was the popular color of the Boers during the South African war, and rendered their movements invisible at a distance. It was



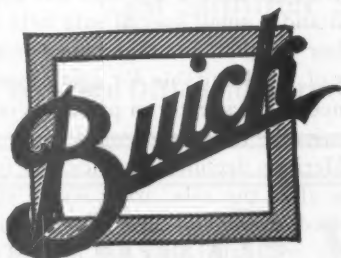
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adopted by the British government as the fighting uniform of their troops; and, briefly, it may be described as an olive shade of color with a green tint. If dyed in the wool, it is a compound mixture of several shades; if dyed in the piece, it is still a compound of materials to render the same effect.

In times of peace, the government places orders intermittently, and regular work for the manufacturers thereof is not assured; consequently, only a few firms cater for that class of business. Khaki finds no sale in the open market, hence the absence of stocks in an emergency caused by the sudden outbreak of war.

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**ADVANCE IN WOOL PRICES.**

The last regular London wool sale was held in July. Then came the war and the September wool sale was postponed and a small special sale held on October sixth. At that sale certain kinds of wool suitable for army goods advanced very greatly in price. Wools not suitable for army goods such as fine Merinos declined in price. A few weeks after the sale, army wools still advanced more and fine Merinos recovered much that they had lost. The following list of prices give the changes in wool prices on October sixth, as compared with the prices for the same wool in July.

Fine greasy Merinos declined.... 2½ cents  
 Fine greasy half-blood advanced. 1 cent  
 Average half-blood advanced.... 2½ cents  
 Three-eighths blood advanced.... 3 cents  
 One-fourth blood advanced..... 3½ cents  
 Pulled lambs' wool advanced.... 7 cents  
 Pulled half-blood lambs advanced. 10½ cents

**SALT BUSH SEED.**

Since we published the story on Australian Salt Bush we have had many inquiries as to where the seed might be obtained. We are advised that the Barteldes Seed Company of Denver, Colorado, carries this seed in stock and sells it at one dollar per pound.

**THE FUTURE OF CROSSBRED WOOL IN AUSTRALIA.**

To what position crossbred wools in Australia will attain is one of great importance, not to Australia alone, but to all the wool producing countries and manufacturing centers of the world, and perhaps to Bradford in particular, where these coarser haired wools are so largely and successfully employed.

There can be no doubt whatever in the minds of those interested that the production of crossbred wools is bound to largely increase in Australia, and I do not think I would be far wrong in saying that such must be the case in practically all sheep-growing countries which are only partially developed.

At the present time there are large tracts of country in Australia carrying Merino sheep, which are eminently suitable for the production of the Lincoln Merino or some other crossbred type of wool. Then again there are other portions of the Continent not yet utilized on which farming could be very successfully followed. At the present time these places are of little use except for keeping a few Merino sheep owing to the want of facilities to cheaply and quickly convey the produce to market, etc., but with the laying down of railways, the opening up of roads and schemes for water conservation, many of the places now given up to the Merino will have to give way to the farmer, and with his advent will come the crossbred sheep, for where there is a ready market for the lamb the crossbred will pay far better than the small Merino, and on those places now idle and desolate will be seen the waving of corn, the bleating of the lamb will be heard, and a happy and prosperous community be established.

Besides these, at present more remote localities, and unused tracts, with the cutting up of the large stations in the most favored portions of the Continent—where every facility is offered for sending the produce to a market, either for home consumption or the export trade—and converting them into farms, there will come an enormous increase of crossbred wool, for it will

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not simply mean an exchange of sheep for sheep, crossbred for Merino, but a much larger number of sheep will be run on the same extent of country.

There is yet another reason why one is led to expect an increased number of crossbred sheep in Australia with the subsequent increased production of this type of wool, and that is that the farmer has come to realize that there is a handsome reward with very little extra cost in attaching a flock of sheep to his farm, and the crossbred, not the Merino, is the farmer's sheep. I have previously mentioned that in many instances the Merino would have to give way to the crossbred. There is already a trend in this direction, and the Merino is now getting pushed farther from the coast line back into the more remote and interior portions of the Continent. And just as the Merino was the subject of improvement, so is the crossbred. Experiments are carried out at the Agricultural Colleges as to the types most suitable for the various districts and to the prolificness and wool growing capacity of the different breeds and crosses; encouragement is given by the government, and the younger generation of farmers are undoubtedly more intelligent and wide awake to the importance of this most valuable factor.

As everyone knows who is connected with the business, there is now a large trade in the export of frozen mutton and lamb from Australia, and the most suitable breed of sheep for the production of a lamb most favored by the English trade is one or other of the crossbred types; those most largely used in New Zealand being the Border Leicester-Merino and Lincoln-Merino crosses. By way of instancing the rapid growth of the crossbred since the introduction of the frozen lamb and mutton export trade it may be said that New Zealand, which not such a great number of years ago was practically a Merino country, has now completely changed, until today, 95 per cent of the sheep of New Zealand are crossbreds. Should this trade assume large proportions in Australia, and I see little reason why it should not, a great

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impetus will be given to the production and improvement of this most valuable class of sheep, and there will be a large amount of skin wool put on the market. I think enough has been written to convince readers that there is every reason to expect an increased production of crossbred sheep and wools.

Now comes the question, "What will be the effect on the price, of not only crossbred, but also on Merino wools?" He is bold who would assert definitely what would happen in this respect, but one might, with a fair amount of confidence, predict that with a greater supply prices will be easier, but then we have to remember that the population of the world is outpacing the increase of sheep, and countries that at one time used little or no wool, are now to be considered factors in the buying community, thus the one may outweigh the other. So much for crossbreds, but what will be the effect on Merino wool? Will there be a less number of Merinos grown or will they simply be pushed back into the more remote parts? At present I think there is little to fear that there will be a falling off in the production of this most valuable type of wool, though in future years the crossbred may—though never to the same degree as it has done in New Zealand—to a certain extent oust the Merino, and unless something untoward happens, prices will have an upward tendency, and the market for this description of wool will be very firm.—Wool Record.

**SHORT WOOL.**

There are two classes of wool, combing and clothing. Combing wools are long and cannot well be used on carding machinery. Clothing wools are short fibered and cannot be used on combing machinery. Now it is said that a machine has been invented in England, that, by cutting the long fibers suitable for combing, make them into short fibers suitable for clothing machinery. Such a machine should prove very valuable and have a good effect upon the wool market.

**STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF AUGUST 24, 1912,**

Of National Wool Grower, published monthly at Salt Lake City, Utah, for October, 1914.

Name of editor, S. W. McClure, post-office address, Salt Lake City, Utah; Managing Editor, S. W. McClure, Salt Lake City, Utah; Business Manager, S. W. McClure, Salt Lake City, Utah; Publisher, National Wool Growers' Association Company.

Owners: (If a corporation, give its name and the names and addresses of stockholders holding 1 per cent or more of total amount of stock. If not a corporation, give names and addresses of individual owners.)

The entire stock of the National Wool Grower is held by the National Wool Growers' Association and twenty state and county woolgrowers' associations. No individual or company has a single dollar's worth of stock in this paper.

Known bondholders, mortgagees, and other security holders, holding 1 per cent or more of total amount of bonds, mortgages, or other securities: (If there are none, so state.)

No bondholders, mortgagees or other security holders of any kind.

S. W. McCLURE.

Sworn to and subscribed before me this 3rd day of October, 1914.

ARTHUR E. MORETON,

(Seal.) Notary Public.

My commission expires January 1, 1918.

**WAR SHEEP.**

'Tis said that in Germany when experiments were to be made to determine the deadly power of some new explosive that sheep were always used. In one instance where a new land torpedo was being tested, 600 sheep were shut in a lot about an acre in size and then the torpedo fired into their midst from some distance. In this case only nine sheep out of the total number escaped uninjured.